AMAX panel 4000 / AMAX panel 4000 EN

ICP-AMAX4-P1 / ICP-AMAX4-P2-EN / ICP-AMAX-P3-EN

BOSCH

en Installation Guide

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1 Graphics

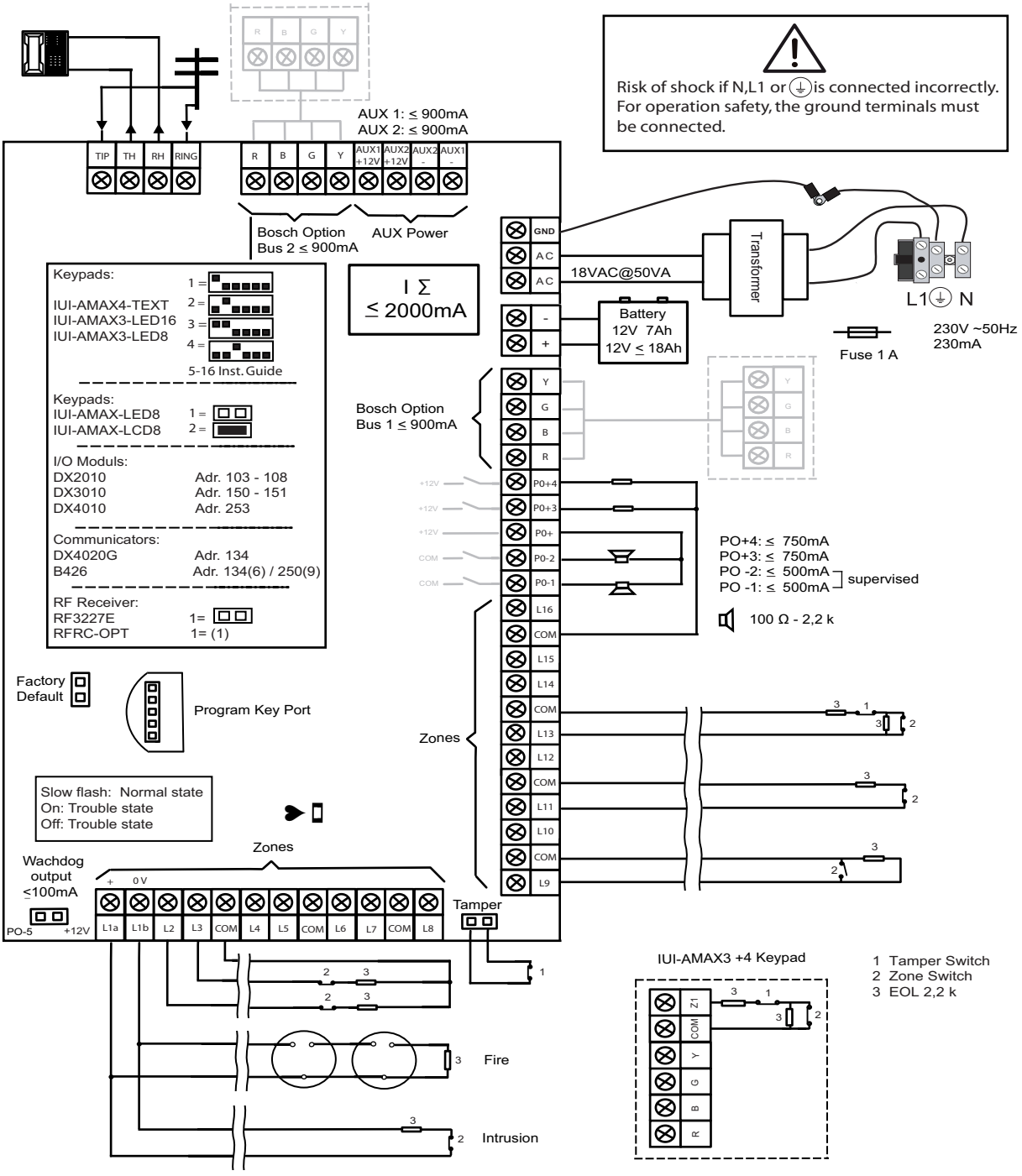


Figure 1.1: Wiring Diagram

2 Safety

This system / product must be installed by a qualified installer / service person.
During installation and wiring, the control panel power source must be switched-off to prevent equipment damage.

– To switch off the Power Source, an easy accessible circuit breaker must be available.
– The System / product must be connected to a socket-outlet with a protective earthing contact

The User has to disconnect all Telecommunication Network Connectors before unplug the power adaptor.

After the control panel wiring is completed, connect the AC power and backup batteries.
The Mains indicator on the keypad will light to show that AC power is connected.

Notice!

- Use only non spillable battery
- Battery must be recycled
- When battery is not replaced correctly, risk of fire explosion or burning
- Replace the battery every 3-5 years under normal conditions of use.
- Place a Label with change date on the battery

Notice!

The system must be installed and maintained by qualified installer / service person.
Bosch recommends testing the whole alarm system at least once a week.
Maintenance should be done by qualified installer / service person four times a year.
Consequences

Danger!

As static-sensitive components are included in PCBs, anti-static steps should be followed and they should be carefully installed.
Before installing the alarm control panel, the static electricity possibly carried should be discharged by contacting the grounding terminal of the alarm control panel.

3 Short Information

Congratulations on selecting the AMAX panel 4000 for your installation. Spend some time reading through this guide and familiarize yourself with the outstanding Operation and installation features of this system so that you can get the most from your unit. In all aspects of planning, engineering, styling, operation, convenience and adaptability, we try to anticipate your every possible requirement. Programming simplicity and speed are our major considerations; we believe that our objectives have been attained. This installation guide explains all aspects of programming the AMAX panel 4000 from factory default to final commissioning. All system parameters and options are dealt with in detail, but adaptability differs with individuals. Each control panel can be tailored to meet your requirements quickly and easily. The programming simplicity makes your installation quick, accurate and rewarding. The AMAX panel 4000 equipped with 16 on-board wired zones can be expanded to 64 wired zones.

4 System overview

4.1 Communication

The AMAX panel 4000 transmits reports with Contact ID and SIA, also supports domestic call. With additional modules B426 and/or DX4020G Conettix IP via Ethernet or GPRS is supported as well as dual IP communication. AMAX panel 4000 supports remote programming and system control by using remote programming software A-LINK PLUS.

4.2 Zones

The alarm control panel supports up to 64 zones, including 16 on-board zones and up to 48 zones increased with upto six DX2010 input expansion modules or wireless devices.

4.3 Tamper Description

The main board is equipped with a separate input for an enclosure tamper contact, not belonging to the 16 on-board zones.

4.4 Area

The system supports up to 16 independent areas. Area 1 can be used as a common area.

4.5 User

The alarm control panel supports up to 64 independent users. User Code and authority can be specified for each user.
When using RF up to 128 Keyfobs are possible, representing 128 additional users.

4.6 Programmable Output

The alarm control panel supports up to 20 programmable outputs, including 4 on-board outputs and up to 16 external outputs using two DX3010 output modules.

4.7 Key Switch

The system can be armed / disarmed with toggle key switch and on/off key switch.
Key Switches are connected to onboard or extension module zone inputs.

4.8 Event Log

AMAX panel 4000 stores events in its non volatile memory. Even if the alarm control panel does not transmit related event report, the event will be maintained. The events in history can be directly inquired through the keypad or uploaded to the remote programming software.
AMAX panel 4000 stores the following lists of events:

Event log	Event quantity	Event type
All event log	254	All events
EN event log	254	EN events
Dialer event log	254	Dialer events

4.9 Keypads

The keypad and the document attached to the alarm control panel further simplify the installation and operation of the alarm control panel.

5 Optional Modules and Peripheral Devices

5.1 Keypad

5.1.1 Brief Introduction

The system supports up to 16 keypads. Five supported keypads are as follows:

- IUI-AMAX4-TEXT (LCD Text Keypad)
- IUI-AMAX3-LED16 (16 Zone LED Keypad)
- IUI-AMAX3-LED8 (8 Zone LED Keypad)
- IUI-AMAX-LED8 (8 Zone LED Keypad)
- IUI-AMAX-LCD8 (8 Zone LCD Keypad)

5.1.2 Address Setting

For IUI-AMAX4-TEXT, IUI-AMAX3-LED16, IUI-AMAX3-LED8 keypads, the address of the keypad is programmed with 6-position DIP switch. See , *page 11*. The address of each keypad is unique.

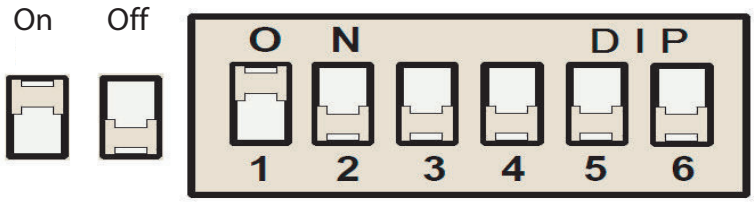


Figure 5.1: 6-Position DIP Switch

DIP switches 5 and 6 are not used.

DIP Switch	S1	S2	S3	S4	S5	S6
Keypad Address	1	2	3	4	5	6
1	On	Off	Off	Off	Off	Off
2	Off	On	Off	Off	Off	Off
3	On	On	Off	Off	Off	Off
4	Off	Off	On	Off	Off	Off
5	On	Off	On	Off	Off	Off
6	Off	On	On	Off	Off	Off
7	On	On	On	Off	Off	Off
8	Off	Off	Off	On	Off	Off
9	On	Off	Off	On	Off	Off
10	Off	On	Off	On	Off	Off
11	On	On	Off	On	Off	Off
12	Off	Off	On	On	Off	Off

13	On	Off	On	On	Off	Off
14	Off	On	On	On	Off	Off
15	On	On	On	On	Off	Off
16	Off	Off	Off	Off	On	Off

Table 5.1: Keypad Address Settings

IUI-AMAX-LED8 and IUI-AMAX-LCD8 keypads can only be set to address 1 or address 2 through the address jumper.

– Jumper not short-circuited: Address 1.
– Jumper short-circuited: Address 2.

Address 1	Jumper not short-circuited:
Address 2	Jumper short-circuited (both metal pins are covered)

Table 5.2: Keypad Jumper Settings

See also

– *Keypad Address Settings, page 11*

5.1.3 Wiring and Installation

Connect the keypad to the bus of the alarm control panel. See , *page 13*

– R: provides 12V power supply for the keypad and other devices.
– B: ground conductor.
– G: for the alarm control panel to transmit data to external devices.
– Y: for external devices to transmit data to the alarm control panel.

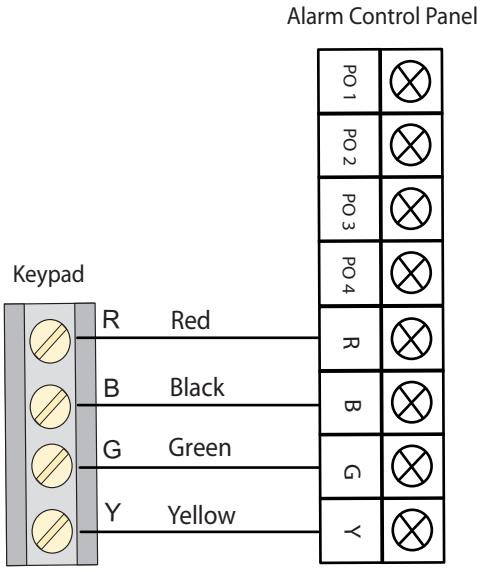


Figure 5.2: Connecting to the Control Panel

The length of the 0.8mm or 1.0mm cable for connection of a single keypad cannot exceed 200 m.

Notice!

The alarm control panel can connect to up to 16 keypads at the same time, upto 8 wired to Bosch Option Bus 1 and upto 8 wired to Bosch Option Bus 2. The total length of the cable for connection of all keypads and expansion module wired to one Bosch Option Bus cannot exceed 700m.

5.1.4 Test

The alarm control panel tests the communication with the keypad and transmits the keypad communication failure report in case of failure of communication.

5.2 DX2010 Input Expansion Module

5.2.1 Installation

The alarm control panel supports up to six DX2010 input expansion modules. The module is connected to Bosch option bus 1 or 2. the data bus of the alarm control panel. Each expansion module supports up to eight zone inputs.
Please refer to , *page 28* for more details.

5.2.2 Wiring

Do not use twisted pair or shielded cable to connect DX2010 and the alarm control panel. For details on length of cable, refer the Table below.

Power Supply	Wire diameter of 0.8mm	Wire diameter of 1.2mm
External Power Supply	200m	200m
Alarm Control Panel	30m	76m

Table 5.3: Lengths of cable for DX2010

For connecting the DX2010 to the bus of the alarm control panel for power supply, refer to Figure below.

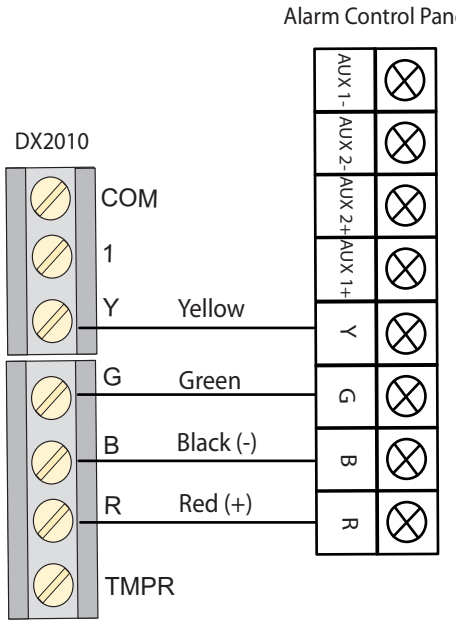


Figure 5.3: Connecting DX2010 to the Control Panel

For use of external power supply, refer to Figure below.

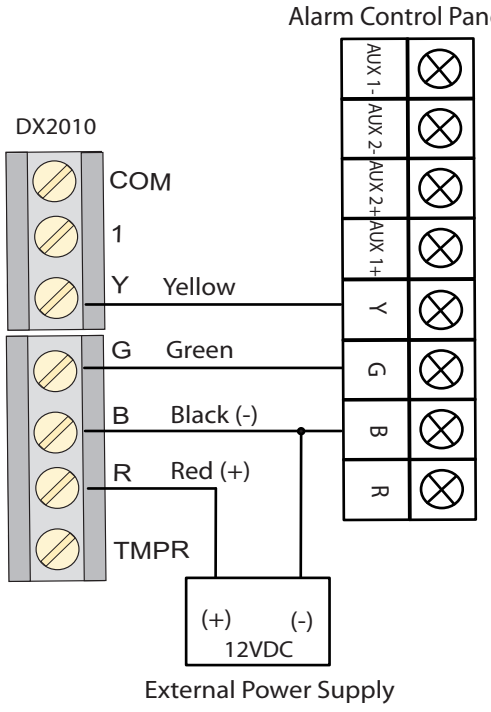


Figure 5.4: Connecting DX2010 to the Control Panel with External Power supply

Notice!

The alarm control panel provides 12 VDC power supply with maximum 900mA for each bus or auxiliary power for the output of external devices.

When the total current of the bus and the auxiliary power supply exceeds 2A, an external power supply is required.

5.2.3 Tamper

Each DX2010 module has an onboard tamper and one tamper input, not belonging to zone inputs.
When the tamper event of DX2010 module occurs, the tamper report is sent with the module address.

5.2.4 Address Setting

Notice!
When data bus address is changed, the module needs to be re-powered to make the new address effective.

Each DX2010 module connected to the alarm control panel must have its own data bus address. Refer to following Table for information.

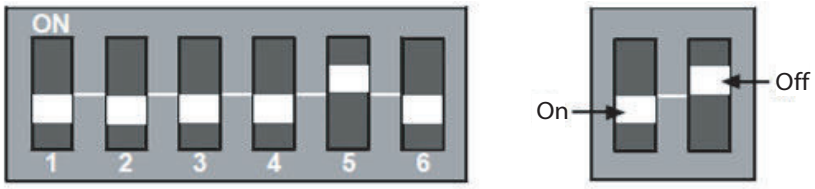
Module	Data Bus Address
DX2010 module 1 (zones 17 - 24)	103
DX2010 module 2 (zones 25 - 32)	104
DX2010 module 3 (zones 33 - 40)	105
DX2010 module 4 (zones 41 - 48)	106
DX2010 module 5 (zones 49 - 56)	107
DX2010 module 6 (zones 57 - 64)	108

Table 5.4: DX2010 Address Settings

For Address DIP switch settings, refer to the followingTable.

DIP Switch	S1	S2	S3	S4	S5	S6
Data Bus Address	32	16	8	4	2	1
103	Off	Off	Off	Off	On	Off
104	Off	Off	Off	Off	On	On
105	Off	Off	Off	On	Off	Off
106	Off	Off	Off	On	Off	On
107	Off	Off	Off	On	On	Off
108	Off	Off	Off	On	On	On

Table 5.5: DX2010 DIP Switch Settings



Example : Data Bus Location 103 - DIP Settings

Figure 5.5: DX2010 DIP Switch Settings

5.2.5 Status Indicator

- Flashing once per second: Indicating normal operation.
- Constant illumination indicates following conditions:
- The grounding conductor is not connected or there is communication failure between the alarm control panel and the module.
- No zones are distributed to modules with corresponding addresses.
- Module address setting error.
- Off: The module is de-Energized.

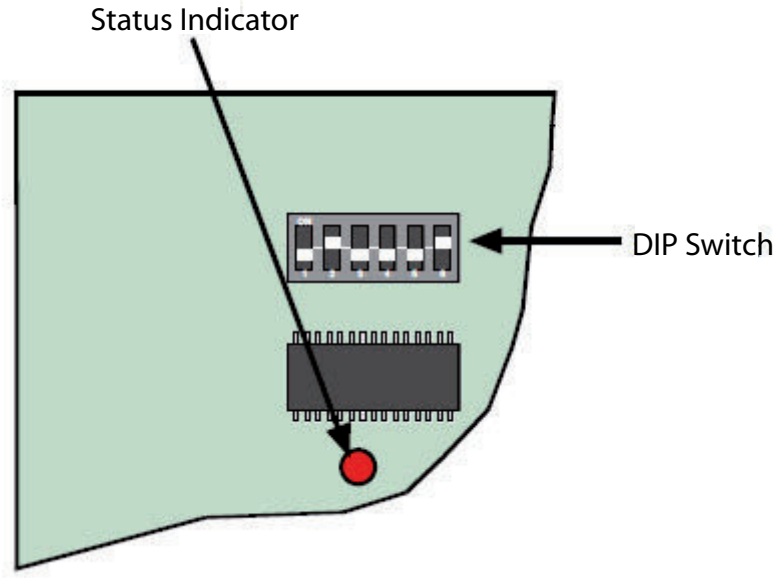


Figure 5.6: DX2010 Status Indicators

5.2.6 Test

The alarm control panel tests the communication normally with the module. In case of communication failure, a fault report with the module address is sent.

5.3 DX3010 Output Expansion Module

5.3.1 Installation

The alarm control panel supports up to two DX3010 output expansion modules. The module is connected to Bosch option bus1 or 2. Each module supports eight fully programmable relay outputs. Like on-board output, DX3010 can be programmed as the output following the area such as alarm event, arming / disarming status event and zone alarm event.
For more information about installation, see DX3010 Installation Guide.
Also refer to , *page 28* for more details.

5.3.2 Wiring

When the module is placed in the enclosure of the alarm control panel, the power supply for the control panel or external power supply can be used. For separate installation, the external power supply must be used.

Power Supply	Wire diameter of 0.8mm	Wire diameter of 1.2mm
Alarm Control Panel	12.2m	24.4m
External Power Supply	305m	610m

Table 5.6: Lengths of cable for DX3010

For details refer to the Figure below.

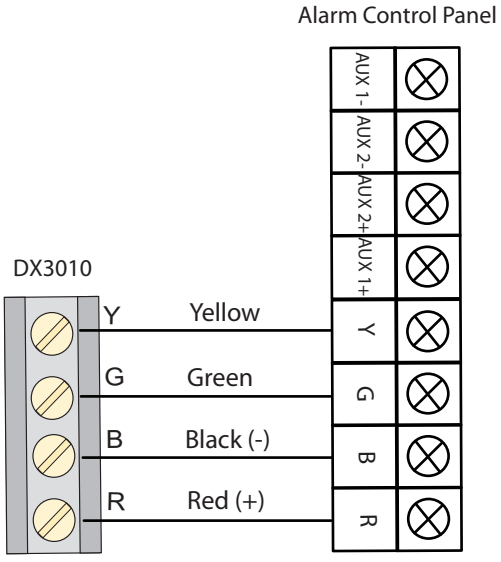


Figure 5.7: Connecting DX3010 to the Control Panel

When connecting to an external power supply refer to the following figure.

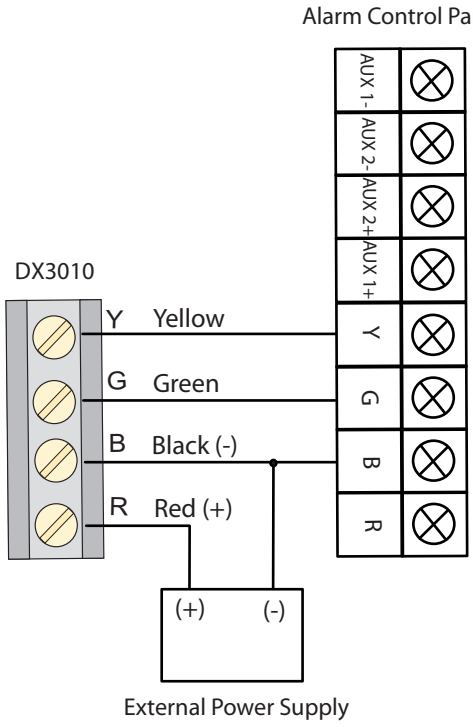


Figure 5.8: Connecting DX3010 to the Control Panel with External Power Supply

Notice!
When the external power supply is used, the black wire (-) is not allowed to be grounded.

5.3.3 Address Setting

Notice!
When data bus address is changed, the module needs to be re-powered to make the new address effective.

Each DX3010 module connected to the alarm control panel must have its own data bus address. For details refer to the Table below.

Module	Data Bus Address
DX3010 module 1 (Output 5 ~ 12)	150
DX3010 module 2 (Output 13 ~ 20)	151

Table 5.7: DX3010 Address Settings

For Address DIP switch settings, refer to the Table below.

DIP Switch	S1	S2	S3	S4	S5	S6
Data Bus Address	1	2	4	8	16	Mode

150	On	On	On	On	On	Off
151	Off	On	On	On	On	Off

Table 5.8: DX3010 DIP Switch Settings

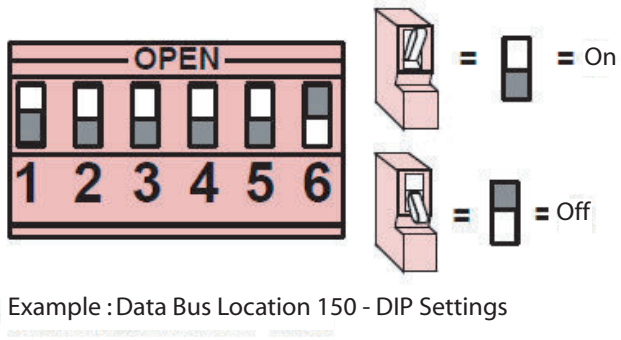


Figure 5.9: DX3010 DIP Switch Settings

5.3.4 Test

The alarm control panel tests the communication normally with the module. In case of communication failure, a fault report with the module address is sent.

5.4 B426 Network Interface Module

5.4.1 Brief Introduction

The B426 Ethernet communication module supports monitored two-way IP communication via Ethernet to perform alarm transmission, remote programming and control of the alarm control panel.
The alarm control panel supports up to two B426 modules.

5.4.2 Installation

Before installing B426, all power supplies (AC power supply and backup battery power supply) of the control panel should be disconnected.
Use the standard three-hole installation mode to install B426 in the enclosure of the alarm control panel case or in another enclosure.
For more information about installation, see B426 Installation and Operating Guide.
Also refer to , *page 28* for more details.

5.4.3 Wiring

Connect B426 to Bosch option Bus 1 or 2. The cable may not exceed 150 meters.

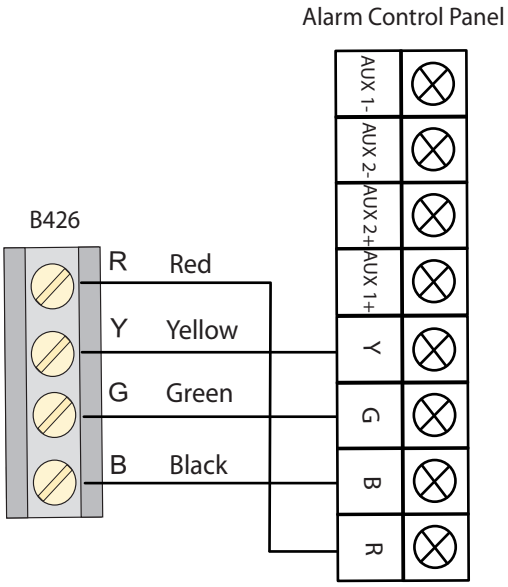


Figure 5.10: Connecting B426 to the Control Panel

5.4.4 Address Setting

Turn the rotary switch to 6, i.e., set the address to 134 when the first B426 is used. Turn the rotary switch to 9, i.e., set the address to 250 when the second B426 is used.

Notice!

When data bus address is changed, the module needs to be re-powered to make the new address effective.

5.4.5 Configuration

To reconfigure the module or connected to the alarm control panel with RPS, the network or direct connection must be used to access its built-in Web server.
For more information about configuration, see B426 Installation and Operating Guide.

5.4.6 Status Indicator

B426 provides the following on-board LED indicators to help in troubleshooting.

- Blue system status indicator.
- Green data bus indicator.
- Green Ethernet link indicator.

Refer to the Table below for details.

Color	Flash Mode	Function
Blue	Stable flash	Normal operation.
Blue	3 flashes	Normal power supply, without communication.
Blue	Constant on	Failure conditions.
Blue	Constant off	Power interruption or other failure conditions.

Table 5.9: Functions of B426 System indicators

For more information about indicators, see B426 Installation and Operating Guide.

5.4.7 Test

The alarm control panel tests the communication normally with the module. In case of communication failure, a fault report with the module address is sent.

5.5 ITS-DX4020-G Communication Module

5.5.1 Brief Introduction

Conettix ITS-DX4020-G GPRS communication module allows IP communication via commercial GPRS network. Transmission of alarm information via GPRS is the default for ITS-DX4020-G. SMS or USB mode can be chosen for configuration. The remote programming and control of the alarm control panel is supported.

The alarm control panel supports up to two communication modules.

– 1 ITS-DX4020-G and 1 B426, or
– 2 B426

5.5.2 Installation

1. Before installing ITS-DX4020-G, all power supplies of the control panel should be disconnected.
2. Insert SIM card.
3. Use the standard three-hole installation mode to install ITS-DX4020-G in the enclosure of the alarm control panel or another enclosure.
4. Connect the magnetic antenna ITS-DX4020-G.

5.5.3 Connection

When ITS-DX4020-G is used for communication with the alarm control panel, the bus address should be set to 134.

The connection of ITS-DX4020-G and the alarm control panel is divided into two modes: GPRS and GSM.

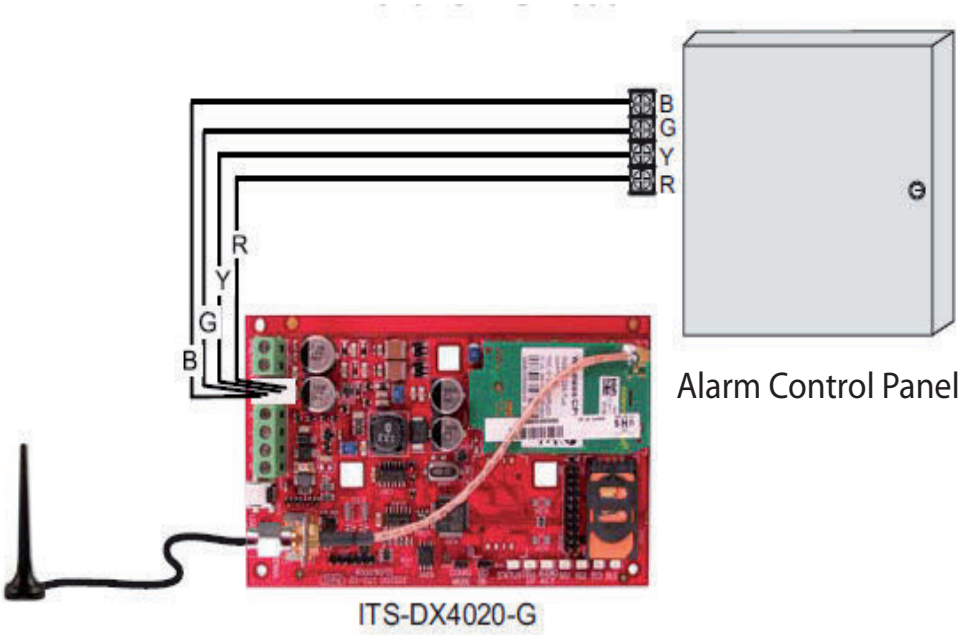


Figure 5.11: GPRS Mode in Support of IP

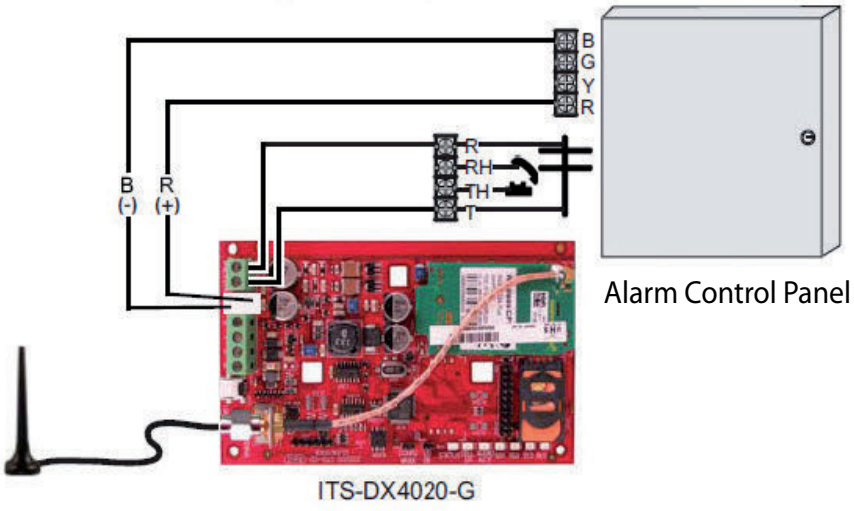


Figure 5.12: GSM Mode in Support of PSTN (Contact ID)

For the status indicator, configuration and more information about ITS-DX4020-G, see Installation and Operation Guide.

5.5.4 Test

The alarm control panel tests the communication normally with the module. In case of communication failure, a fault report with the module address is sent.

5.6 RF 3227E RF Receiver

5.6.1 Brief Introduction

The RF3227E RF Receiver allows the use of wireless devices using AMAX panel 4000.

5.6.2 Installation

Considerations

The receiver should be mounted in a central location in regard to all wireless sensors, whenever possible.

The receiver should be mounted vertically with at least 25 cm clearance above it for the antennas.

Avoid mounting the receiver in areas with significant metal or electrical wiring such as furnace rooms or utility rooms. If this is unavoidable, mount the receiver with the antennas extending above any metal surface.

Avoid mounting the receiver in areas where it may be exposed to moisture.

Reception distances are generally improved with higher mounting locations and with no metal objects near the antennas.

Setting Up the Wall Tamper

Notice!

If not using the wall tamper, proceed to *Mounting the Receiver, page 24*

To enable the wall tamper switch:

– Remove the cover of the receiver (see *Figure 5.13*).

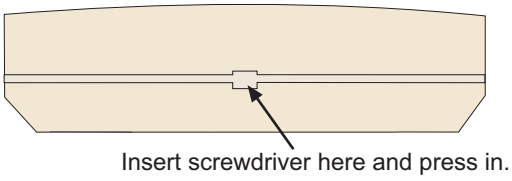


Figure 5.13: Removing the Cover

– Remove the inner cover by pressing the latch.

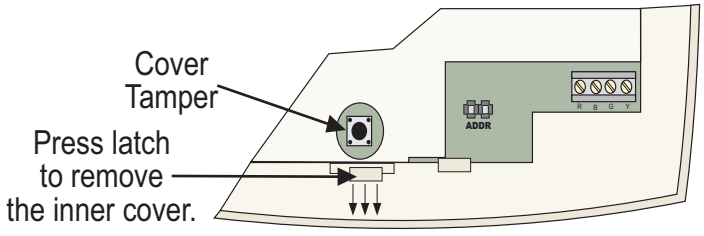


Figure 5.14: Removing the Inner Cover

– Move the wall tamper jumper as shown in *Figure 5.15*.

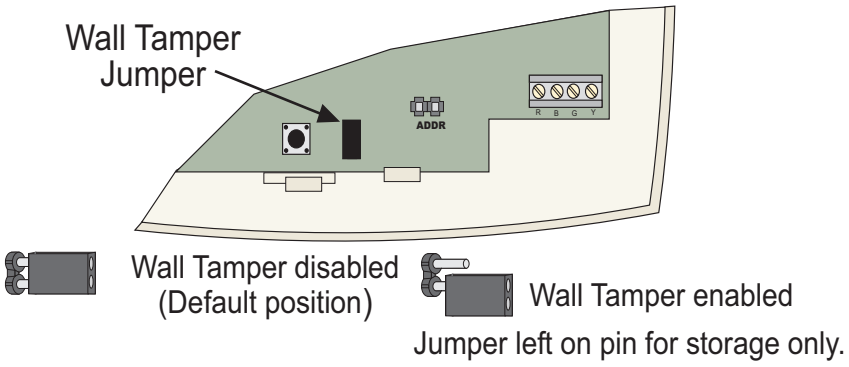


Figure 5.15: Wall Tamper Jumper

– Replace the inner cover.
– Place the spring from the hardware packet over the shaft of the tamper switch located on the back of the receiver (*see Figure 5.16*).

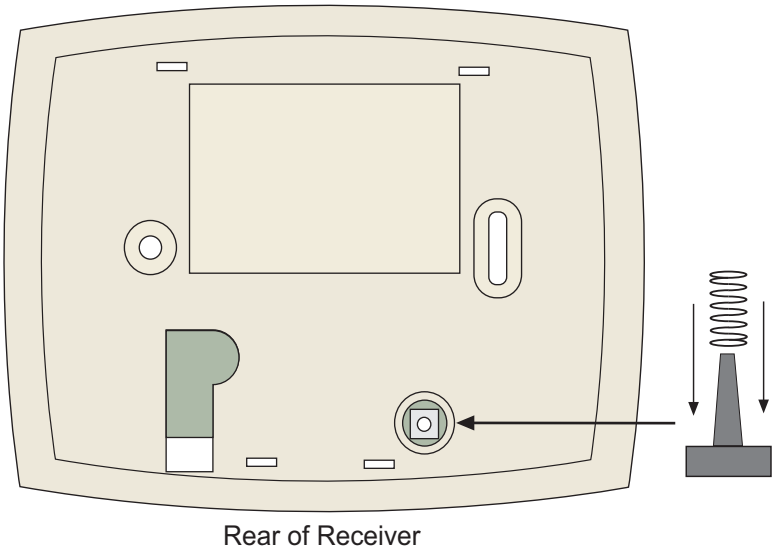


Figure 5.16: Rear of Receiver

Notice!
Cause of Hazard
Gently press the spring onto the tapered shaft. Do not force it down onto the shaft

Mounting the Receiver

• Determine the receiver's mounting location.
• If not already done, remove the receiver's cover (as shown in *Figure 5.13*).
• Place the receiver base on the wall at the desired mounting location and mark the two mounting holes (see *Figure 5.17*).

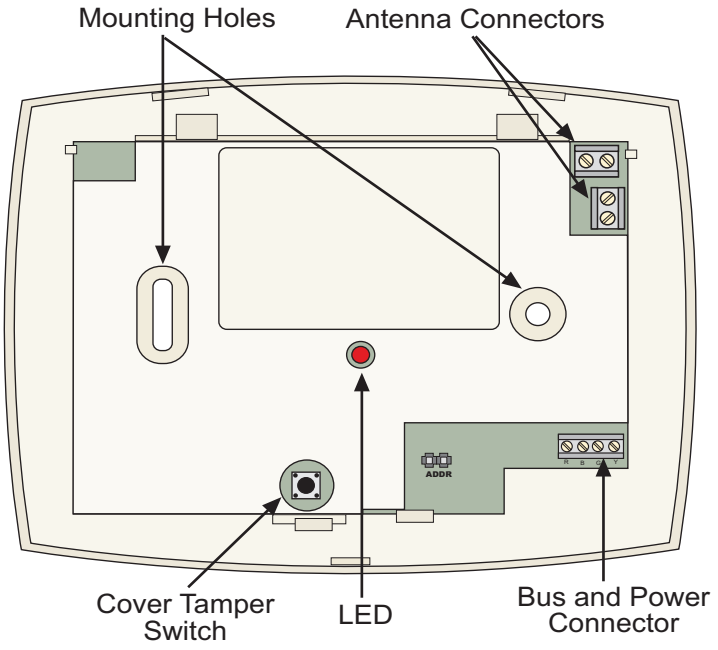


Figure 5.17: Mounting the Receiver

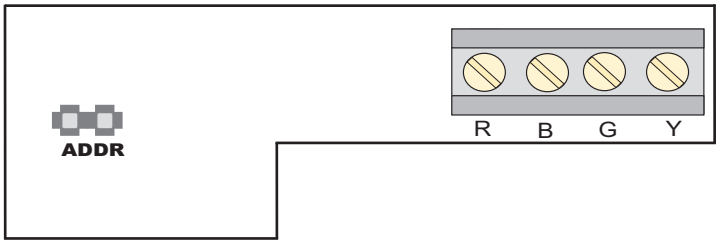


Figure 5.18: Bus and Power Connector

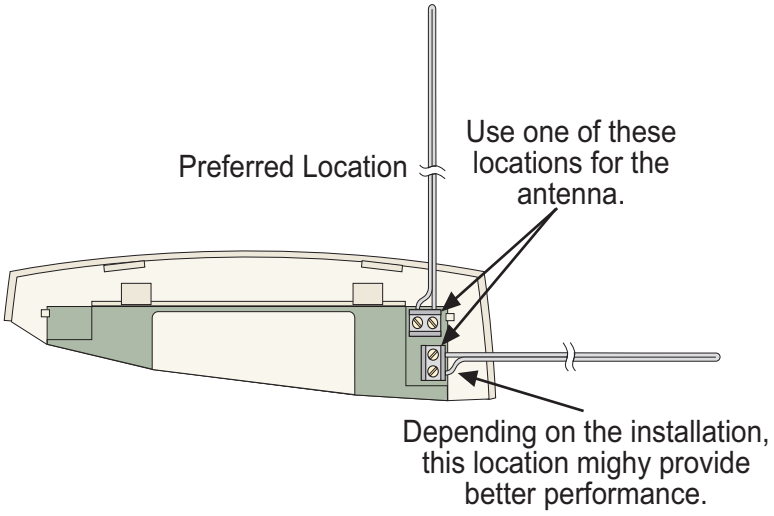

Preferred Location
Use one of these locations for the antenna.
Depending on the installation, this location mighy provide better performance.

Figure 5.19: Connecting Antennas

5.6.3 Address Setting

Notice!
When data bus address is changed, the module needs to be re-powered to make the new address effective.

The receiver address option must have setting, Receiver #1.
AMAX panel 4000 supports Receiver 1 only, Receiver 2 is not supported.

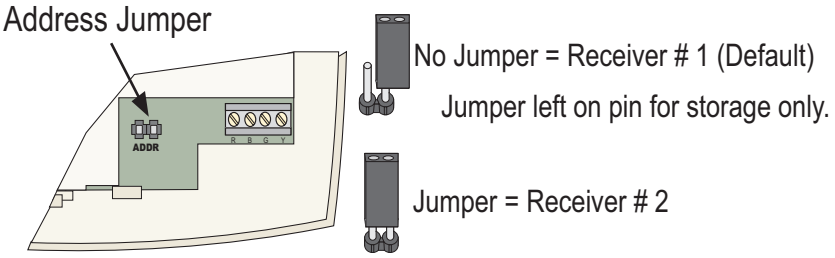


Figure 5.20: Address

5.6.4 Wiring

Connect RF3227E receiver to Bosch option Bus 1 or 2. The cable may not exceed 300 m. Adding additional devices to the bus might reduce the maximum distance. Shielded cable is not required. Do not use twisted pair wire.

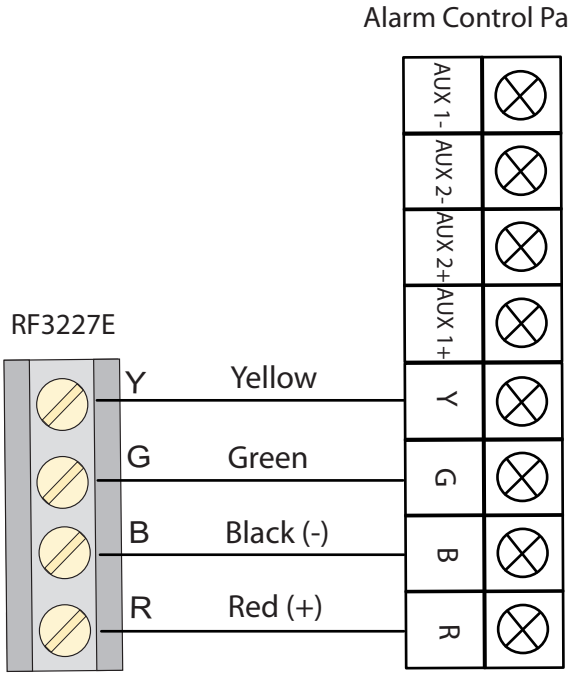


Figure 5.21: Connecting RF3227E

5.6.5 Status Indicator

Table describes the receiver's status based on the LED condition.

LED Condition	Indicates
On	The receiver is functioning normally.
Off	A power failure occurred or the receiver is not correctly wired.
Turns on momentarily	The receiver acknowledged receiving a message from a compatible transmitter
Flashes rapidly for less than one minute	The receiver is being programmed with zone and transmitter IDs from the compatible panel. This condition occurs at system initialization (power up) or when new zone information is programmed into the system. The rapid flashing lasts less than one minute.
Flashes rapidly for more than one minute	The receiver failed power-up self tests. Replace the receiver

5.7 RFRC-OPT Radion Receiver

General Information

The RFRC Opt Radion Receiver allows the use of wireless devices using AMAX panel 4000.

Installation

Address Setting

AMAX 4000 panel supports one receiver only.

Wiring

Connect RFRC - OPT Radion Receiver to Bosch opton Bus 1 or 2.

Status Indicator

5.8 Remote Programming Software

It can be remotely connected to the software ITS-A-LINK PLUS developed by Bosch or the third-party software integrated with BOSCH SDK to program the alarm control panel. The software can access all the options and functions and manage and maintain event records and service reports.

For more information about ITS-A-LINK PLUS, see User Guide.

5.9 Programming Key / Firmware Upgrade Key

The programming key can copy and store all programming information in the alarm control panel. Firmware Upgrade Key is used for firmware upgrade.

6 Installation

This chapter specifies installation and system power up of the AMAX panel 4000.

This system / product must be installed by a qualified installer / service person.
During installation and wiring, the control panel power source must be switched-off to prevent equipment damage.

– To switch off the Power Source, an easy accessible circuit breaker must be available.
– The System / product must be connected to a socket-outlet with a protective earthing contact

The User has to disconnect all Telecommunication Network Connectors before unplug the power adaptor.

After the control panel wiring is completed, connect the AC power and backup batteries.
The power light on the keypad will light to show that AC power is connected.

Notice!

- Use only non spillable battery
- Battery must be recycled
- When battery is not replaced correctly, risk of fire explosion or burning
- Replace the battery every 3-5 years under normal conditions of use.
- Place a Label with change date on the battery

Notice!

The system must be installed and maintained by qualified installer / service person.
Bosch recommends testing the whole alarm system at least once a week.
Maintenance should be done by qualified installer / service person four times a year.

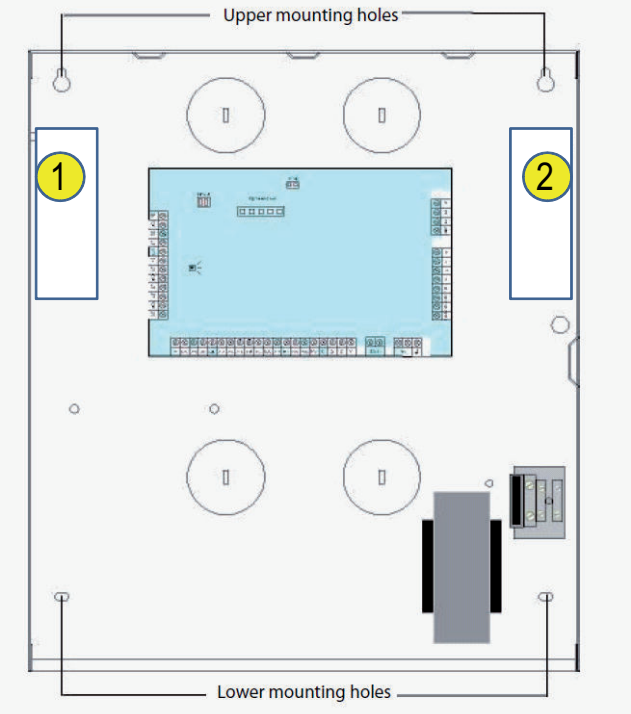
6.1 Module Installation

The enclosure contains only PCBs and transformers of the fixed alarm control panel, not other hardware for installation.

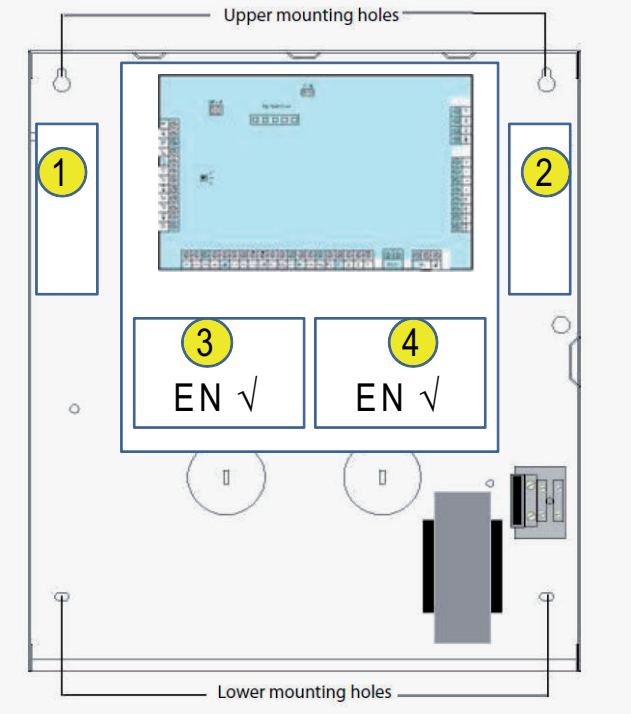
1. Open the knockout holes for wiring in the module.
2. Position two upper mounting holes on the installation wall with the module.
3. Pre-install screws on the mounting holes (provided by the installer).
4. Mount the screws on the module.
5. Fasten the screws.
6. Fix the two lower mounting holes with screws.

Notice!

Please choose appropriate positioning screw kit when installed in a non-load-bearing wall.



Enclosure - Standard



Enclosure with mounting plate

Figure 6.1: Enclosure / with mounting plate

Expansion modules can be placed in enclosure of the alarm control panel. Several places are available. Figure 6.1. shows standard enclosure installation and enclosure installation with mounting plate

6.2 Battery Installation

The system supports one sealed lead-acid rechargeable battery. After fully charged, the battery can be used as a backup power supply to support the system.
Please refer to , *page 171*

Notice!

- Use only non-spillable battery
- Battery must be recycled

When battery is not replaced correctly

- Risk of fire explosion or burning.

Replace the battery every 3-5 years under normal conditions of use. Label on the battery the date each time a new battery is installed.

Danger!

Special care is required in connecting the positive (red) wire and the “BATT +” port of the alarm control panel. If short-circuiting with the “BATT +” port of the alarm control panel or the enclosure, electric arc will occur. To remove the battery from the control panel, the positive wire of the battery should be disconnected first.

1. Place the battery on the bottom of the module.
2. Position the red and black wires supplied with the battery.
3. Connect one end of the black wire to the "BATT -" port of the alarm control panel, the other end to the negative (-) pole of the battery.
4. Connect one end of the red wire to the "BATT +" port of the alarm control panel, the other end to the positive (+) pole of the battery.

After the backup battery and the main power are connected, once the installation is completed, the alarm control panel will began to charge the battery.

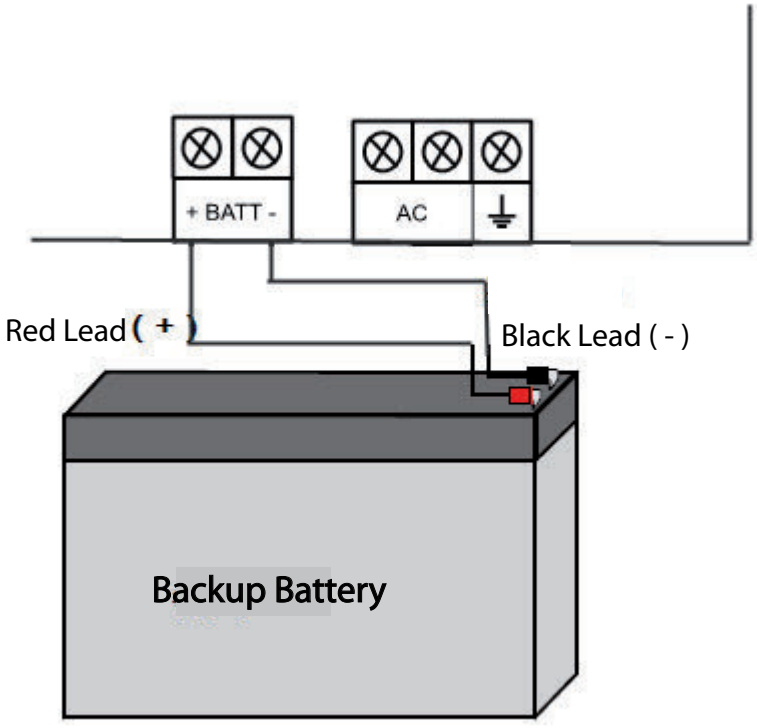


Figure 6.2: Connection of Battery

6.3 System Power Up

After the system is powered up, set date and time. Otherwise, the system prompts as fault.
After the system is powered up or reset, it resets to previous arming / disarming status.
To reduce false alarms caused by system power-up (or by power supply restoration after both mains supply and AUX power supply fail), the system is designed to not perform zone test within one minute after power-up.

6.4 System Status Indicator

The system status is indicated by the LED status indicator on the system main board.
Slow flash of red status indicator (repeating on and off with an interval of 1 second) indicates normal system operation.

6.5 Prerequisites for Certification conform Installation

6.5.1 EN 50131-3 Grade 2, Environmental Class 2

- System must be placed inside the monitored area on a stable surface.
- Keypads must be mounted to the inner side of the monitored area.
- Once the system is tested and ready to use, Enclosure Door and Accessory Enclosures must be secured with the provided screws
- To realize EN conform Alarm Indication and Transmission, one of the following options must be used
  - Two supervised Warning devices (PO-1 PO-2 & PO+) and one ATS 2 Communicator (onboard Dialer, B426, D4020 or DX4020G)
  - One self powered Warning Device and one ATS 2 Communicator (onboard Dialer, B426, D4020 or DX4020G)
  - Two Communicators, one ATS 2 (onboard Dialer, B426, D4020 or DX4020G) and one ATS 1 (onboard Dialer, B426, D4020 or DX4020G)
  - One ATS 3 Communicator (DX4020 or B426)

All Communicators must be connected to a Central Monitoring Station.
Only the onboard Dialer and the Option Bus Communicators can be used for EN Alarm Transmission.

- one 12V/7AH or one 12V/18Ah Battery must be connected to the System.
- max current for all components with a 7Ah Battery = 550mA

max current for all components with a 18Ah Battery = 1500mA
(standby 12h, recharge Battery 80% in 72h)
(PCB=I00mA, IUI-AMAX Keypads=31mA, DX2010=35mA, DX3010=10mA, B426=100mA, DX4020G=65mA, RF3227E=30mA, RFRC-OPT=30mA)

- To realize EN conform Arming procedure an indication of arm/disarm status must be accessible from outside the monitored area (this indication can be time limited)
- To realize EN conform Access to the Monitored Area, one of the following options must be used
  - Opening a door (to the entry/exit route) must start the entry procedure
  - Indication of arm/disarm Status
  - Access to the monitored Area (doors not starting entry procedure) is prevented (e.g. door strike, mechanically)

The Enclosure lock can only be used in non EN setup.

- Telephone arming can only be used in non EN setup.
- Accessory Modules, except input module (DX2010) can be used only inside the enclosure (on the adapter plate).
- When input module (DX2010) is used in the external enclosure (AE20) the tamper skirt must be installed on the PCB of input module (DX2010)
- The panel must be programmed with the EN settings indicated on the programming sheet. When the panel is set without EN parameters, the EN Indication (on Label) must be removed.

7 Settings

This chapter specifies the properties and the behavior of the AMAX panel 4000.

7.1 Communication and Reporting

This section outlines the programming information required for the AMAX panel 4000 / AMAX panel 4000 EN when communicating with a base station receiver. These parameters specify the telephone numbers/IP address to be called, transmission formats and internet communication options.

7.1.1 Receiver Telephone number /IP Address and Port

The control panel can report event information from four on-board dialers. The dialers report to Receiver 1 to Receiver 4 by programming. You can program each dialer with 4 separate telephone numbers/IP addresses and ports, reporting format type and subscriber ID number, and internet communication options if necessary.

Example

You can set up Dialer 1 to report to receiver 1 in CFSK Format and set up Dialer 2, Dialer 3 and Dialer 4 to report to a base station receiver in Contact ID Format only if Dialer 1 is unsuccessful.

To program a telephone number:

Each address in the telephone numbers stores one digit of the telephone number.
Insert a 15 at the end of a telephone number to indicate to the dialer that the end of the telephone number is reached. The dialing sequence is terminated when a 15 appears.

Example

To program the telephone number 9672 1055 as the Telephone Number for Receiver 1, program the following sequence into Address 000 - 016:
[9 6 7 2 1 0 5 5 15 x x x x x x x] x stands for any digit. To enter a 4-sec pause in the dialing sequence, program a 13. A pause might be necessary when the dialer communicates through an old (slower) telephone exchange or when a PABX system is in place.

Example

To program the number 02 pause 9672 1055, enter:
[0 2 13 9 6 7 2 1 0 5 5 15 x x x x].
The following table shows how to program the numbers, keys, and functions for a telephone number.

Digit Required	Number to Program	Digit Required	Number to Program
0	0	8	8
1	1	9	9
2	2	*	11
3	3	#	12
4	4	4 sec pause	13
5	5	Terminal	15
6	6		
7	7		

Table 7.1: Dialing Digits

To program the IP Address and port:
Use no punctuation in IP address. If any unit of IP address is less than 3 digits, use 0 to fulfill the data in the higher bits. The remaining 5 digits will program the port. Port number ranges from 0-65535. Any port is less than 5 digits, use 0 to fulfil the data.
Example
To program the IP Address 10.16.1.222:80 as the IP Address of Receiver 1, enter the following sequence into Address 000 - 016:
[0 1 0 0 1 6 0 0 1 2 2 2 0 0 0 8 0]

Notice!
Programming option anti-replay, acknowledge wait time and pulse interval time are only used in Conettix IP.

Telephone number for Receiver 1 - 4/IP Address and Port
When the corresponding data format for above programming address is a network communication format, it is explained as an IP Address and Port. For a non network format, it is explained as telephone number.
When the control panel transmits a report, it dials the telephone number/IP Address to contact the monitoring station. If the call is successful, the relevant information is transmitted and the dialer returns to Standby Mode.
Contact your monitoring station for the correct telephone number/IP Address before you program these addresses.

7.1.2 Receiver Subscriber ID Number

Receiver 1 - 4 Subscriber ID Number
The Subscriber ID Number is transmitted to identify the calling control panel. Enter the Subscriber ID Number in the six addresses provided for each destination. If a Subscriber ID Number is less than 6 digits, use 0 to full fill the data in the higher bits.
Example
Program Subscriber ID Number as 4729 in six addresses: [0 0 4 7 2 9]

7.1.3 Receiver Transmission Format

Transmission Format
Receiver 1 - 4 Transmission Format
You can select the transmission format with Address options to specify how to transmit the information to the base station receiver. If Contact ID or SIA format is selected, the information is transmitted by telephone line; if Bosch Network is selected, then it is connected with B426/DX4020 or ITS-DX4020G GPRS. Transmission format is defaulted as Contact ID.

Transmission Formats (Contact ID, SIA, Conettix IP)
The AMAX panel 4000 / AMAX panel 4000 EN provides three kinds of transmission formats, Contact ID, SIA and Conettix IP format for its dialing and communication features. Program the transmission format for Receiver 1, 2, 3 and 4 separately in Address 023, Address 053, Address 083 and Address 113 (refer to Transmission Format). The control panel is set at the factory to report in the Contact ID Format.

Contact ID Format

Contact ID Format can identify hundreds of zones by their unique codes. This format provides a single-digit Event Qualifier and a three-digit Event Code that quickly identifies the reported condition.

In general, Contact ID Format is very simple because most of the Event Codes and Point ID Codes are predefined. The base station software usually can identify an alarmed zone by its Point ID Code and usually pays little attention to the Event Code.

– **Contact ID Message Format**

ACCT MT Q EEE GG CCC S
ACCT = Subscriber ID
MT = Message type, H
Q = Event Qualifier
1= New event or Opening
3= New restore or Closing
6= Previously reported off-normal event
EEE = Event Code
GG = Group Number (always 0)
CCC = Zone/ Contact ID, 000 is for no zone/ID message
S = Checksum digit
Note: Any 0 values must be sent as an 0x0A.
Contact ID Report Data.

SIA Format

AMAX panel 4000 supports SIA Format. SIA allows transmitting System ID, event code, zone ID, area ID, event time and also event text.

Conettix IP Format

AMAX panel 4000 supports Conettix IP. AMAX panel 4000 with DX4020G and B426 are able to connect to Bosch Receivers 6600/6100 using Conettix IP Format.

Event Description	CID	SIA	ALL Event	KP Recall	Dialer Event	EN Event
SYSTEM RESET			√		√	
BURG ALARM	1130	BA	√	√	√	√
BURG ALARM RESTORE	3130	BR	√			
BURG 24HOUR	1133	BA	√	√	√	√
BURG 24HOUR RESTORE	3133	BH	√			
SENSOR FAULT	1380	BT	√			
SENSOR FAULT RESTORE	3380	BJ	√			
SENSOR BYPASS	1570	BB	√			√
SENSOR BYPASS RESTORE	3570	BU	√			
SENSOR TAMPER	1144	TT	√	√		√
SENSOR TAMPER RESTORE	3144	TJ	√			

Event Description	CID	SIA	ALL Event	KP Recall	Dialer Event	EN Event
ARM AWAY	3401	CL	√	√		√
DISARM AWAY	1401	OP	√	√		√
ARM STAY	3441	CL	√	√		√
DISARM STAY	1441	OP	√	√		√
KEYPAD PANIC	1120	PA	√		√	
KEYPAD FIRE	1110	FA	√		√	
KEYPAD EMERGENCY	1100	QA	√		√	
DURESS	1121	HA	√		√	
KEYPAD TOOMUCH RETRY	1421	JA	√			√
BATTERY LOW	1309	YT	√		√	
BATTERY RESTORE	3309	YR	√		√	
AC FAIL	1301	AT	√		√	
AC RESTORE	3301	AR	√		√	
AUX POWER	1300	IA	√			
AUX POWER RESTORE	3300	IR	√			
COMM TEST	1602	RP				
CONFIG CHANGED	1306	YG	√		√	
COMM FAIL	1350	YC	√		√	√
COMM RESTORE	3350	YK	√		√	
EXTERNAL MODULE FAULT	1333	EM	√			√
EXTERNAL MODULE RESTORE	3333	EN	√			
EXTERNAL MODULE TAMPER	1341	ES	√			√
EXTERNAL MODULE TAMPER RESTORE	3341	EJ	√			
DATE TIME SET	1625	JT	√		√	
USER CODE CHANGE		JV	√			√
ENTER PROGRAM MODE		LB	√			
EXIT PROGRAM MODE		LX	√			
PHONE LINE FAIL	1351	LT	√		√	√
PHONE LINE RESTORE	3351	LR	√		√	
PANIC 24 HOUR	1120	PA	√	√	√	
PANIC 24 HOUR RESTORE	3120	PH	√			
FIRE 24 HOUR	1110	FA	√	√	√	

Event Description	CID	SIA	ALL Event	KP Recall	Dialer Event	EN Event
FIRE 24 HOUR RESTORE	3110	FH	√			
OUTPUT FAULT	1320	YA	√			√
OUTPUT RESTORE	3320	YA	√			
DAYLIGHT SAVING TIME +1h	1625	JT	√		√	
DAYLIGHT SAVING TIME -1h	1625	JT	√		√	
FAULT OVERRIDE			√			√
PANEL ACCESS	1422	JP	√		√	
SOFTWARE UPDATE		YZ	√		√	
REMOTELINK SUCCESS	1412	RB	√			
CLOCK FAIL	1626					
TAMPERZONE TAMPER	1137	TA	√	√		√
TAMPERZONE TAMPER RESTORE	3137	TH	√			
ZONE EXT FAULT	1150	UA	√	√		√
ZONE EXT FAULT RESTORE	3150	UR	√			
DELAY EXIT	1134	BA	√	√		
DELAY EXIT RESTORE	3134	BR	√			
BURG ALARM VERIFIED	1139	BV	√	√	√	√
BURG ALARM UNVERIFIED	1130	BG	√	√		
IP MODULE FAULT	1333	EM	√		√	√
IP MODULE RESTORE	3333	EN	√		√	
PRINTER MISSING	1336	VZ	√			
PRINTER MISSING RESTORE	3336	VY	√			
PRINTER ERROR	1335	VT	√			
PRINTER ERROR RESTORE	3335	VR	√			
PRINTER MODULE MISSING	1333	EM	√			
PRINTER MODULE MISSING RESTORE	3333	EN	√			
RF RECEIVER MISSING	1333	EM	√			
RF RECEIVER MISSING RESTORE	3333	EN	√			
RF RECEIVER TAMPER	1341	ES	√			
RF RECEIVER TAMPER RESTORE	3341	EJ	√			
RF RECEIVER FAULT	1333	ET	√			
RF RECEIVER FAULT RESTORE	3333	ER	√			

Event Description	CID	SIA	ALL Event	KP Recall	Dialer Event	EN Event
RF RECEIVER JAM	1344	XQ	√			
RF RECEIVER JAM RESTORE	3344	XH	√			
RF RECEIVER CONFIGURATION CONFILICT			√			
RF RECEIVER CONFIGURATION CONFILICT RESTORE			√			
RF POINT MISSING	1381	UY	√			
RF POINT MISSING RESTORE	3381	UJ	√			
RF POINT BATTERY FAULT	1384	XT	√			
RF POINT BATTERY FAULT RESTORE	3384	XR	√			
RF POINT FAULT	1380	BT	√			
RF POINT FAULT RESTORE	3380	BJ	√			
RF REPEATER MISSING	1382	UY	√			
RF REPEATER MISSING RESTORE	3382	UJ	√			
RF REPEATER BATTERY FAULT	1384	XT	√			
RF REPEATER BATTERY FAULT RESTORE	3384	XR	√			
RF REPEATER TAMPER	1383	XS	√			
RF REPEATER TAMPER RESTORE	3383	XJ	√			
RF REPEATER AC FAULT	1334	YP	√			
RF REPEATER AC FAULT RESTORE	3334	YR	√			
RF KEYFOB BATTERY FAULT	1384	XT	√			
RF KEYFOB BATTERY FAULT RESTORE	3384	XR	√			
RF KEYFOB PANIC ALARM	1120	PA	√			
RF KEYFOB SILENT ALARM	1122	HA	√			
RF CHANGE KEYFOB			√			
FIRE UNVERIFIED	1378	FG	√	√		

7.1.4 Receiver Network Programming Options

When the control panel transmits a report via network, the following options should be programmed other than the IP Address and port:

Anti Reply

Anti-replay prevents unauthorized messages from being sent to the Central Monitoring Station and being recognized as originating from the control panel.

Contact your central monitoring station for the correct setting.

Acknowledge Wait Time

When no callback from the receiver after the acknowledge time is reached, the control panel takes it as an unsuccessful communication and makes another attempt. The time ranges from 5 to 99 sec.
Contact your central monitoring station for the correct setting.

Network Polling Time

The polling is used for both panel and remote receiver to know whether the network connection is good or not. Each time when a polling is due, the control panel will send a polling message. The polling time range is from 1 to 999 minutes. For time less than 3 digits, use 0 to fulfil.
Contact your central monitoring station for the correct setting.

7.1.5 Dual IP

Dual IP Settings are valid only when used with Conettix IP communication format. IP module 1 is ITS-DX4020-G module or B426 module; IP module 2 is B426 module. IP module 2 does not support RPC connection.
When the report is transmitted with Conettix IP Communication, some reports might be missed. It is recommended not to separately use ITS-DX4020-G module. If ITS-DX4020-G module is used, other network modules (e.g. B426) or the public telephone network can be set as backup channel to ensure no reports are missed.
The communication path of B426/ITS-DX4020-G is as follows:

Module	Address Setting	Corresponding Communication Path
Module 1: B426 module 1/ITS-DX4020-G	134	Paths 1 and 2
Module 2: B426 module 2	250	Paths 3 and 4

When IP module 1 is used only and set to send to paths 1 to 4, the report can be sent to paths 1 to 4.

7.1.6 System Reporting

Report Transmission Sequence

If the event has disabled the report (option 0), no report is sent out. The domestic alarm is set as configured. If the report has any destination to contact the panel (option 1, 2, 3, 4, 5, 6, 7), It will call the related destination by related reporting format type and subscriber ID Number.

Attempt rules:

1. **Attempt times and duration**
   - The attempt sequence is destination 1, 2, 3, 4 and domestic destination. Some disabled destinations will be ignored.
   - When a new report needs to be sent out, the system will send the report based on the report destination programming list.
   - For each enabled destination, the panel will retry sending the report to it till the report has been sent to the destination, or till the report buffer overflows and the old report is replaced by new incoming reports.
   - For each enabled destination, the retry interval time between two retries is 15 seconds for the 1st retry to 4th retry, and the retry interval time between two retries is 10 minutes for the 5th retry to 8th retry, after the 8th retry the retry interval time between two retries is 60 minutes.
   - For all enabled destinations (except domestic destinations), the waiting time for next retry would be cleared to zero as long as there is a new report.
2. **Attempt Priority**
   - The attempt priority is destination 1, 2, 3, 4, Domestic. The disabled destinations will be ignored.
3. **Communication Fail Fault**
   - If the attempt times for one destination reaches 4, the system will cause the communication fail fault for this destination.
4. **Backup Destination Process**
   - If the destination failed for 4 attempts, the pending reports will switch between primary/backup destinations in this group. If the report option selects 6, only one group: 1, 2, 3, 4 destinations. If the report option selects 7, there are two groups: group 1 is 1, 2 destinations. Group 2 is 3, 4 destinations. The system can save up to a maximum of 50 un-reported events. If the un-reported events are more than 50, it will delete earlier events and only save the last 50 events in the buffer to send out.

Sequential Logic to Send Report

- If the event reporting path is set to 0, the relevant reports will not be sent.
- If the event reporting path is set to a single path (receiver 1, 2, 3 or 4), the alarm control panel will send reports to corresponding paths. Path 1, 2 3 or 4 fault will result in path 1, 2, 3 or 4 communication fault; Path 1, 2 3 or 4 recovery will result in communication path 1, 2, 3 fault recovery.
- If the event reporting path is set to all paths (receiver 1, 2, 3, 4), the alarm control panel will send reports to corresponding paths. Any one of these paths fails, the communication path will fail; the path recovers, the communication path fault will recover.
- If the event reporting path is set to sending report to receiver 1, with receiver 2, 3, 4 as backup, the alarm control panel will send reports to corresponding paths. Send to path 2 when the attempt to send to path 1 fails; Send to path 3 when the attempt to send to path 2 fails; Send to path 4 when the attempt to send to path 3 fails; communication path 1 fault will occur when all valid paths fail; communication path 1 fault will recover when any one of the paths recovers.

– If the event reporting path is set to sending report to receiver 1, receiver 2 as backup; sending report to receiver 3, receiver 4 as backup; the alarm control panel will send reports to corresponding paths.

Communication path 1 fault will occur when path 1 and valid path 2 fail; communication path 1 fault will recover when fault 1 or 2 recovers.

Communication path 3 fault will occur when path 3 and valid path 4 fail; communication path 3 fault will recover when fault 3 or 4 recovers.

The attempt rules to send reports are as follows:

1 - Number and time of attempts to send report

When CID format or Conettix IP communication format is used for all, the order of priority of attempts is path 1, 2, 3, 4, personal alarm telephone 1 - 4. The unused paths are ignored.
When a new event report occurs, the system will send reports in accordance with the specified path.
For each reporting path used, the alarm control panel will repeatedly try until the report is successfully sent.
For each reporting path used, the interval of the first 4 attempts is 15 seconds, the interval of the fifth to eighth attempt is 10 seconds, and the interval afterwards is 60 seconds.
For each reporting path used (excluding personal telephone alarm), if a new event occurs, the waiting time for the next retry will be cleared. If the newly-occurred event is communication path fault, the previous retry logic will not be affected (the waiting time will not be cleared).

2 – The order of priority of attempts to send report

When CID format or Conettix IP communication format is used for all, the order of priority of sending report is path 1, 2, 3, 4, personal alarm telephone 1 - 4. Some unused paths will be ignored.

3 – Communication failure fault

When a report is still not successfully sent after the reporting path has been attempted for up to 4 times, the system will generate the communication failure fault event of the path.

4 – Backup event

If an event is not successfully sent, the alarm control panel will provide a buffer to store up to 50 events. If more than 50 events are not successfully sent, only the last 50 events will be stored in the buffer until the events are delivered. Other earlier events will be deleted.

5 - Display of faults

When multiple reports are queued for delivery, the communication path fault is displayed as logic or relationship. Example:
Set zone status recovery report to send report to receiver 1; set keypad emergency report to send report to receiver 1, with receiver 2, 3, 4 as backup.
Communication path fault is as follows: When communication paths 1, 2, 3, and 4 all fail, as the communication path fault is displayed as logic or relationship, only the illumination of zone indicator 1 expresses that the communication path 1 of the zone status recovery report fails and the all communication paths 1, 2, 3 and 4 of the keypad emergency report fail as well.
Communication path fault recovery is as follows:

– When communication path 1 fault recovers, zone indicator 1 goes off, indicating that the communication path 1 fault of the zone status recovery report recovers and the communication part 1 fault of the keypad emergency report recovers.
– When any one path fault of communication paths 2, 3 and 4 recovers, as the communication path fault is displayed as logic or relationship, zone indicator 1 still illuminates, indicating that the communication path 1 fault of the zone status recovery report has not be recovered, but the path fault of the keypad emergency report has been recovered

Zone Status Reporting and Zone Recovery Reporting
Alarm Report
In arming status, in case of alarm event, the alarm report will be sent.

Alarm Recovery Report
In arming status, when the zone recovers, the zone recovery report will be sent at the end of alarm output time.
If the non-24-hour zone is not recovered in disarming, the system will automatically send a zone recovery report. The 24-hour zone sends zone recovery report only when the zone recovers.

Zone Fault Report
If the zone is in triggering status at the end of exit delay, a zone fault report will be sent, indicating that the zone is automatically bypassed by the system. At the end of exit delay time, the 24-hour zone in triggering status will not send zone fault report, i.e., the 24-hour zone will not be automatically bypassed.
The non 24-hour zone fault recovery report will be sent when the zone recovers or the system disarms. For the 24-hour zone, only the alarm recovery event will occur.
The zone fault occurs when the zone is triggered and recovers when the zone is normal. Zone fault will occur when one of the following conditions is met:
– For 24-hour zone, (internal) instant zone, if the forced arming option is set to allow, the zone fault event will occur when the arming operation is executed while the zone is in triggering status.
– When the zone is locked.
– For (internal) delay and (internal) follow zone, if they are still in triggering status at the end of exit delay, zone fault event will occur.
– For 24-hour zone, if it is in triggering status when the bypass is cancelled, zone fault event will occur.

Fault recovery conditions:
– Zone resumes to normal conditions.
– When the failed (internal) delay zone, (internal) instant zone and (internal) follow zone are disarmed, the fault recovery event will occur even if the zone is still in triggering status.

Zone Bypass Report
After the manual bypass zone is operated, the zone will be bypassed. The zone bypass report will be sent at the end of exit delay time. The bypass report of the 24-hour zone will be sent immediately after manual bypass operation.
The zone bypass will be recovered when the system is disarmed and the zone bypass recovery report will also be sent while disarming.

Zone Tamper Alarm
In case of zone tamper event, the tamper report will be sent. When zone tamper recovers, the system status report will be sent.

Arming/Disarming Reporting (System)
The system disarming report is sent at the disarming command and the system arming report is sent when the arming succeeds.
Duress Report
The duress report is sent at the disarming command. The duress report will not be sent in the operation of arming, but sent as ordinary arming report. The duress report has not corresponding alarm recovery report.
Key Switch Arming
Send system arming report when the transient key switch or locking key switch is used to arm areas.
Quick Arming
Send system arming report when the keypad is used for quick arming.
Telephone Arming
Send system arming report when the telephone is used for arming of the panel.
Telephone arming is only available when there is only 1 Area in the system.
RPC Arming
Send system arming report when the remote PC is used to arm areas through network or telephone connection.
Arming/Disarming Reporting (Perimeter)
The perimeter disarming report is sent at the disarming command and the perimeter arming report is sent when the arming succeeds.
Quick Arming
Send perimeter arming report when the keypad is used for quick arming.
RPC Arming
Send perimeter arming report when the remote PC is used to arm areas through network or telephone connection.

System Status Reporting
External Module Fault Report
- System tamper report: In case of case tamper event, the system tamper report will be sent. When case tamper recovers, a tamper recovery report will be sent.
- Zone Expansion Module Fault: When zone expansion module 1 – 6 fails, the report will be sent; after the fault is recovered, the recovery report will be sent.
- Output Expansion Module Fault: When output expansion module 1 or 2 fails, the report will be sent; after the fault is recovered, the recovery report will be sent.
- Network Module Fault: When network module 1 or 2 fails, the report will be sent; after the fault is recovered, the recovery report will be sent.
- Keypad Fault: When fault occurs between the keypad and the alarm control panel, the report will be sent; after the fault is recovered, the recovery report will be sent.
- Zone Expansion Module Tamper: When tamper occurs in the zone expansion module, the tamper report will be sent; when the tamper recovers, a tamper recovery report will be sent.
- Keypad Tamper: When tamper occurs in any keypads, the tamper report will be sent; when the tamper recovers, a tamper recovery report will be sent.

Auxiliary Power Fault Report
When the system detects auxiliary power fault, the report will be sent.
Auxiliary Power Fault Restore Report
When the system detects auxiliary power fault recovery, the report will be sent.
AC Power Fault Report
When the system detects disconnection of AC power, the report will be sent.
AC Power Fault Recovery Report
When the system detects recovery of AC power, the report will be sent.
Battery Low Voltage Fault Report
When the battery voltage is lower than 11.0V or battery low voltage is detected in dynamic battery test, the alarm control panel will send battery low voltage report.
The system continuously monitors the battery voltage and will perform a dynamic battery test each time the system is armed, when the system is reset, or every 4 hours.
Battery Low Voltage Fault Recovery Report
When the battery voltage is lower than 12.0V or recovery to normal voltage is detected in dynamic battery test, the battery low voltage fault recovery report will be sent.
Times of Wrong Code Entry Exceeding Limit
When the times of entering wrong code reach the specified one, an access denial report will be generated and alarm will be made.
This function limits the times of malicious attempts of password by the unauthorized user. When the times of entering wrong password reach the specified one by programming, the alarm control panel will execute following actions:
– Activate alarm siren and other alarm output.
– Lock all keypads for 3 minutes.
– Send access denial report.
On-board Output 1 – 2 Fault
When on-board output 1 or 2 fails, the report will be sent. When the on-board output resumes to normal conditions, the programmable output fault recovery report will be sent.
Communication Path 1 - 4 Fault
When any communication paths fail, the report will be sent. When the communication resumes to normal conditions, the communication fault recovery report will be sent.
Changing Programming Parameters
When the programming parameters are changed and take effect, the report will be sent.

Keypad Emergency Alarm Reporting
To press and hold both [1] and [3] for 3 seconds, or press and hold both [#] and [*] for 3 seconds, the emergency alarm report will be sent.
The emergency alarm report has not corresponding alarm recovery report.

Keypad Fire Alarm Reporting
To press and hold both [4] and [6] for 3 seconds, the fire alarm report will be sent.
The fire alarm report has not corresponding alarm recovery report.

Keypad Medical Aid Reporting
To press and hold both [7] and [9] for 3 seconds, the medical aid alarm report will be sent.
The medical aid alarm report has not corresponding alarm recovery report.

Automatic Test Reporting
The system supports sending automatic test report.

For more information about test report time programming, see Test Report Time. For more information about date and time settings, see Date and Time Settings.

7.1.7 Automatic Test Report

The test report is divided into two types: periodic and regular daily report.

– When the address 0129-0130 is programmed to 1-99, the system will send periodic automatic test report every hours specified by the address. If 0129-0130 is programmed to 0, no periodic test reports will be sent.
– When 0131-0134 is set to valid time, the system will send automatic test report at the same time every day. At this moment, the date and time of the system must be correctly set. If 0131-0134 is set to be invalid time, the daily regular automatic test report will be disabled.

7.1.8 Report Expiry Time

If the report expiry time expires and the report path has not been connected, the report will be lost and will not be sent. It can be maintained for 1 to 255 minutes. The system is defaulted to 000, indicating that the report has been tried to send without limit in expiry time.

7.1.9 Remote PC Settings

By means of running Remote Programming Software (RPS) on a remote PC (RPC), the alarm control panel can be remotely programming or controlled, including uploading/downloading programming parameters, remote arming/disarming of each area, enabling/disabling the alarm siren of each area, enabling/disabling each output, etc.
Remote Programming Software, i.e. RPS, includes Bosch A-Link Plus software and the third-party software of integrated with Bosch SDK.
The IP remote connection function allows to establish a connection from the remote PC to the alarm control panel through LAN or WAN to perform remote programming and control.
While the connection is established, alarm control panel sends a polling telegram of 25 bytes.

IP Address
RPC IP address is a fixed IP address for remote programming software.

Port Number
RPC port number is the port number of the remote programming software.

DHCP Update / RPC poll Time Interval
DHCP update / RPC poll time is the interval the alarm control panel connects to the RPC (Remote Programming PC).
The alarm control panel send UDP data packets to the RPC according to the DHCP Update Time Interval setting (0=disabled 1-15h Interval), when the Panel is reset and when call back is finished.
RPC get the Subscriber ID, IP address and port from the UDB data packets (IP No. and Port is parsed from UDP data packet).
RPC with running RPS (Remote Programming Software = A-Link Plus) saves the received UDP data packet information's into its own RAM, the information is lost after RPS is closed.
When a connection is started and the IP address set in the Customer Information doesn't match with the IP Address from the Ram, A-Link opens a window to ask if the new IP Address and Port should be used.

When RPS is opened, a connection can only be established when the IP address and port number of the alarm control panel have not changed, after RPS received previous data..
If the IP address has changed RPC with running RPS must wait for the next UDP Data package send from the Panel.

Number of Rings
The address sets the number of rings of the alarm control panel before answering incoming calls. Please set proper number of rings. This setting is only related to the connection of remote programming software by means of telephone. Setting this address to 0 can disable the alarm control panel to answer all incoming calls no matter how other programming addresses are set.

Telephone Remote Connection
Use telephone to remotely program and control the system.
For telephone remote connection to enable programming, see Telephone Remote Connection.

Call back Telephone Number
This address stores the telephone number to call when Upload/Download is requested or the user enters his code + [5][7] and presses [#] to initiate a modem call from the control panel to establish a communication link with the remote computer. The computer must be running A-Link Plus RPS software and must be set to Waiting for an Incoming Call. The Call Back Telephone Number is also necessary if remote connect with call back verification is required.

Ring Count
This address sets the number of rings before the control panel answers an incoming call. Setting this count to an acceptable level has an effect only if Remote Arming and the Remote Upload/Download are enabled. Programming this address to 0 prevents the control panel from answering incoming calls regardless of any other programmed options.

7.1.10 Domestic Call

Four dialing telephone numbers will be supported.
When the control panel is activated into zone tamper/ zone alarm, it dials the programmed telephone number.
All alarm events only need one report/acknowledgement.
The transmission sequence is repeated until the control panel receives an acknowledgement tone.
The control panel automatically hangs up after 45 seconds if it cannot detect the acknowledgement tone. And redial later.
The user presses [#] between two acknowledgement tones to confirm the alarming.
The acknowledgement tone is the DTMF signal sent by the remote user with the [#] .
If the control panel got the [#] acknowledgement from the user, it will send 2 seconds long beep as acknowledge tone and hang up the line.

7.2 Zones

7.2.1 Zone Inputs

On-board Inputs:
There are 8 onboard hard-wired inputs for AMAX panel 4000 / AMAX panel 4000 EN. An additional input is provided for enclosure tamper but does not subtract from the 8 onboard totals.

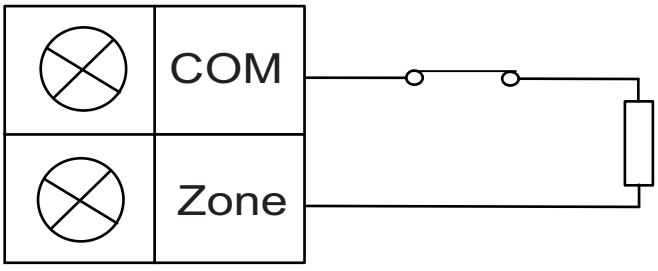
On-board Zone Response Time:
Each on-board zone response time is:
Zone Status trigger time >= 400ms, must response
Zone Status trigger time < 300ms, no response

On board Zone EOL

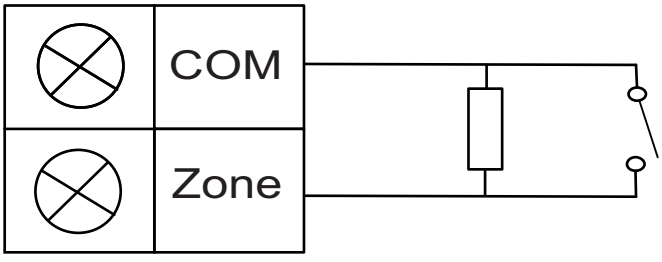
1. **Single EOL**: If zone tamper function is not selected, each zone uses a single 2.2k ohm EOL. The panel can detect the zone as short, normal or open.

Loop Resistance (ohm)			**Zone Status**
Min	Type	Max	
0		1430	triggered
1650	2200	2750	normal
2970		∞	triggered

The detectors (sensors) will be connected between zone and COM terminal through EOL series connection (open triggered) or EOL parallel connection (short triggered).



The detectors (sensors) will be connected between zone and COM terminal through EOL series connection (open triggered) or EOL parallel connection (short triggered).

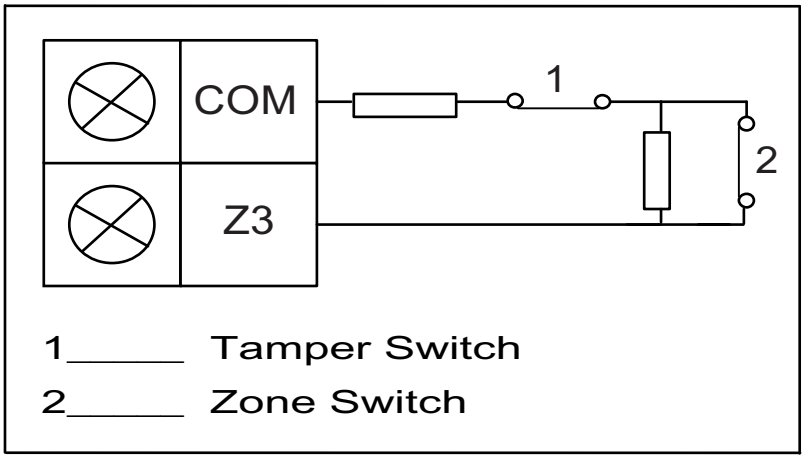


The panel sets the short/open as activate when connecting with single EOL.
The valid zone number is 1-8 for AMAX.

1. **Dual EOL**: If the tamper supervision is set, we only can use the NC contact point. The EOL status is:

Loop resistance (ohm)			Zone Status
Min	Type	Max	
o		1430	tamper
1650	2200	2750	normal
2970	4400	4950	triggered
5220		∞	tamper

Using one 2.2K resistor as EOL of the tamper zone, which works together with the zone EOL 2.2K. Refer to the drawing:



On -board Tamper Input
A separate input is provided for enclosure tamper (This is in addition to the 8 on-board total inputs). The response time of the tamper input is a fixed zone response time. The tamper loop will cause a siren alarm when the loop is open, and will be reported when the loop is open (based the “system status report option”).When powered up, the system will wait for 60 seconds to setup the normal work.
Tamper Switch connector Input:
Close: Normal
Open: Alarm Tamper Alarm process is the same as 24-Hour Alarm process (Onboard Tamper is processed as zone number 17).

7.2.2 Zone Function Settings / Zone Types

Zone Types

Zone Function Option		Description
Zone Type	00	Zone Not Used
	01	Instant
	02	Interior Instant
	03	Delay
	04	Interior Delay

05	Follower
06	Interior Follower
07	24-Hour
08	Key-Switch Toggle
09	Key Switch on/off
10	24 Hour Panic
11	24 Hour Fire
12	24 Hour Fire With Verification
13	Tamper
14	Bolt Contact
15	External Fault
16	Delay Exit
17	Interior Delay Exit
18	Technical Alarm
19	Reset
20	Instant Without Reset
21	Reserved

0

If a zone is not used, program the zone type location to 0. An EOL resistor is not required if this zone type is not used. This zone type never activates the sirens or the dialer.

1 - Instant

The instant zone will perform as below:

1. Disarm:
   - Zone normal - no Alarm / no report
   - Zone triggered - no Alarm / no report
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - (Zone triggered during exit time no Alarm / no report)
   - (Zone triggered during entry time Alarm / report is delayed for 30sec or entry time is expired, when system is disarmed before, no report)
3. STAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - (Zone triggered during exit time no Alarm / no report)
   - (Zone triggered during entry time Alarm / report is delayed for 30sec or entry time is expired, when system is disarmed before, no report) When Zone is triggered, not bypassed and system is forced to arm, a Zone fault report is sent.
   - When System is disarmed and zone is not restored before, a Zone fault restore report is sent.

2 - Interior Instant

The interior instant zone will perform as below:

1. Disarm:
   - same as the Instant Zone disarm status
2. AWAY Arm:
   - same as the Instant Zone AWAY Arm status
3. STAY Arm:
   - This Zone will be Ignored and performed as disarm. Refer to Section Keypad Indicators, page 20 to see how the zone is displayed during exit time.
   - When Zone is triggered, not bypassed and system is forced to arm, a Zone fault report is send.
   - When System is disarmed and zone is not restored before, a Zone fault restore report is sent

3 - Delay

The delay zone will perform as below:

1. DISARM: Same as Instant zone disarm status
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Entry time starts - no Alarm / no report
   - Disarming during entry time - no Alarm / no report
   - Zone triggered - during exit time - no Alarm / no report
   - Zone triggered - during entry time - no Alarm / no report
   - Zone triggered - entry time is expired - Alarm / report
   - (report is delayed for 30sec, when system is disarmed before, no report)
3. STAY ARM: Same as AWAY ARM performance.
   - First delay zone will start the entry time; all other delay zones will follow.
   - When System is disarmed and zone is not restored before, a Zone restore report is sent.

4 - Interior Delay

The Interior delay zone will perform as below:

1. Disarm: same as the Instant Zone disarm status
2. AWAY Arm: same as the Delay Zone AWAY Arm status
3. STAY Arm:
   - This Zone will be Ignored and performed as disarm.
   - Refer to Section Keypad Indicators, page 20 to see how the zone is displayed during exit time.

5 - Follower

The follower zone will perform as below:

1. Disarm:
   - same as the Instant Zone disarm status
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - Zone triggered - during exit time - no Alarm / no report
   - Zone triggered - during entry time - no Alarm / no report
   - The remaining Delay Time is handed over from the Delay Zone to the Follower Zone.
   - The follower zone will performance as the same as a delay zone.

- If there are two or more zones programmed as delay zones and both are triggered, the follower zone will follow the first triggered delay zone

3. STAY ARM: same as the delay zone.

6 - Interior Follower

The interior follower zone will perform as below:

1. Disarm: same as the Instant Zone disarm status
2. AWAY Arm: same as the Follower Zone AWAY Arm status
3. STAY Arm:
   - This zone will be ignored and performed as disarm.
   - Refer to Section Keypad Indicators, page 20 to see how the zone is displayed during exit time.

7 - 24 Hour Zone

The 24 Hour zone will perform as below:

1. Disarm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - Zone triggered - during exit time - Alarm / report
   - Zone triggered - during entry time - Alarm / report
3. STAY Arm: Same as AWAY Arm performance.
   - A 24 Hour zone does not send a restore report until the zone is restored.

8 - Tamper Zone

The Tamper zone will perform as below:

1. Disarm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - Zone triggered - during exit time - Alarm / report
   - Zone triggered - during entry time - Alarm / report
3. STAY Arm: Same as AWAY Arm performance.
   - A Tamper zone does not send a restore report until the zone is restored.

9 - Fire Zone

The Fire zone will perform as below:

1. Disarm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Alarm / report
   - Zone triggered - during exit time - Alarm / report
   - Zone triggered - during entry time - Alarm / report
3. STAY Arm: Same as AWAY Arm performance.

– A Fire zone does not send a restore report until the zone is restored.

10 - External Fault Zone

The Fault Zone/Input will perform as below:

1. Disarm:
   – Zone normal - no Alarm / no report
   – Zone triggered - Fault / report
2. AWAY Arm:
   – Zone normal - no Alarm / no report
   – Zone triggered - Alarm / report
   – Zone triggered - during exit time - Fault / report
   – Zone triggered - during entry time - Fault / report
3. STAY Arm: Same as AWAY Arm performance.
   – The restore report will be sent when the zone is restored.

11 - Bolt Contact Zone

The Bolt-Contact zone will perform as below:

1. Disarm:
   – Zone normal - no Alarm / no report
   – Zone triggered - no Alarm / no report
2. AWAY Arm:
   – Zone normal - no Alarm / no report
   – Zone triggered - no Alarm / no report
   – Zone triggered - during exit time - no Alarm / no report
   – Zone triggered - during entry time - no Alarm / no report
3. STAY Arm: Same as AWAY Arm performance.
   – This zone is mainly for prevention of arming (to ensure exit/entry door is locked before arming the system and no alarm occurs when entering the premise through the entry/exit door)

12 - Key Switch Toggle

If a zone is programmed as key-switch toggle, it will ignore all other programming items, such as bypass, forcing arm. If the Zone Tamper function is enabled, the zone will process as zone tamper. When a zone is programmed for key-switch arming then that zone is the input for a momentary (toggle mode) keyswitch input. In toggle mode, every time the keyswitch input is triggered the system will be armed.

Zone triggered: AWAY Arm

Zone normal: No effect

When the system is armed in this mode, the keypad activates two beeps and report sent is by User Code 254.

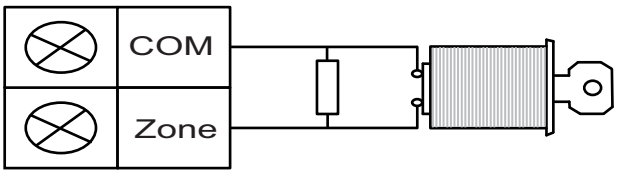
13 - Key switch On / Off

If a zone is programmed as key-switch On/Off, it will ignore all other programming items, such as bypass, forcing arm.If the Zone Tamper function is enabled, the zone will process as a zone tamper. When a zone is programmed for key-switch arming then that zone is the input for a On/Off keyswitch input. In On/Off mode, the control will arm when the zone is zone triggered and disarm when it is normal. This zone allows the system to be armed or disarmed with an on/off switch wired across the keyswitch zone.

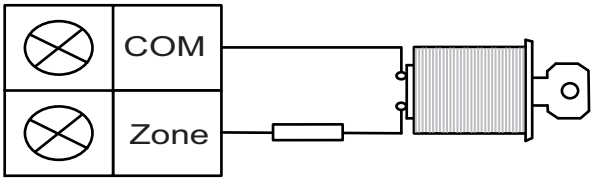
Key-switch On/Off Zone activates no alarm event.

Zone triggered: Activate AWAY Arm.

Zone normal: Activate Disarm
Wiring Diagram for Key-switch Zone: short for arm. The momentary time is capable of lasting Min. 300ms.



Wiring Diagram for Key-switch Zone: short for arm. The momentary time is capable of lasting Min. 300ms.



When the key-switch operates the Arm/Disarm, the keypad sounds two beeps and report sent to the system by User Code 254

Notice!
As the key-switch operates the arm/disarm successfully, the siren sounds short to indicate it.

16 - Delay Exit
The delay exit zone will perform as below:
1. DISARM: Same as Instant zone disarm status
2. AWAY Arm:
   - Zone normal - no Alarm / no report
   - Zone triggered - Entry time starts - no Alarm / no report
   - Disarming during entry time - no Alarm / no report
   - Zone triggered - during exit time - no Alarm / no report / abbreviates remaining time for exit to 5 s
   - Zone triggered - during entry time - no Alarm / no report
   - Zone triggered - entry time is expired - Alarm / report (report is delayed for 30sec, when system is disarmed before, no report)
3. STAY ARM: Same as AWAY ARM performance.
   - First delay zone will start the entry time; all other delay zones will follow.
   - When System is disarmed and zone is not restored before, a Zone restore report is sent.

17 - Interior Delay Exit
The Interior delay exit zone will perform as below:
1. Disarm: same as the Instant Zone disarm status
2. AWAY Arm: same as the Delay Exit Zone AWAY Arm status
3. STAY Arm:
   - This Zone will be Ignored and performed as disarm.

– Refer to *Section Keypad Indicators, page 20* to see how the zone is displayed during exit time.

18 - Technical Alarm

The Technical Alarm zone will perform as below:

1. Disarm:
   – Zone normal - no Alarm / no report
   – Zone triggered - Alarm / report
2. AWAY Arm:
   – Zone normal - no Alarm / no report
   – Zone triggered - Alarm / report
   – Zone triggered - during exit time - Alarm / report
   – Zone triggered - during entry time - Alarm / report
3. STAY Arm: Same as AWAY Arm performance.
   – A Technical zone does not send a restore report until the zone is restored.

19 - Reset

The Reset zone will perform as below:

1. Disarm:
   – Zone normal - no Alarm / no report
   – Zone triggered – performs system reset / no report
2. AWAY Arm:
   – Zone normal - no Alarm / no report
3. STAY Arm: Same as AWAY Arm performance.

20 - Instant Report

The Instant report zone will perform as below:

1. Disarm:
   – Zone normal - no Alarm / no restore report
   – Zone triggered - no Alarm / no report
2. AWAY Arm:
   – Zone normal - no Alarm / no restore report
   – Zone triggered - no Alarm / sends report
   – Zone triggered - during exit time - Alarm / sends report
   – Zone triggered - during entry time - Alarm / sends report
3. STAY Arm: Same as AWAY Arm performance.

7.2.3 Zone Function Settings / Zone Options

Zone Function Option		Description
Force Arm / Bypass	0	Disabled
	1	Force Arm
	2	Bypass
	3	All
Silent Alarm / Chime Mode	0	Disabled
	1	Silent Alarm

	2	Chime Mode
	3	All
Zone Pulse count	0	Disabled
	1-9	1-9 Pulses
Zone Lockout	0	Disabled
	1	1 Times Alarm Lockout
	2	3 Times Alarm Lockout
	3	6 Times Alarm Lockout
	4	Alarm Duration
Zone Tamper	0	Disabled
	1	Enabled
Zone Status Report	0	No Report Required
	1	Receiver 1
	2	Receiver 2
	3	Receiver 3
	4	Receiver 4
	5	Receiver 1, 2, 3 and 4
	6	Receiver 1 (2, 3 and 4 for backup)
	7	Receiver 1 (2 for backup) and Receiver 3 (4 for backup)
Unverified Alarm Report / Cross Zone	0	Disabled
	1	Unverified Alarm Report
	2	Cross Zone
	3	All
Domestic No.		Follow 'Alarm report' Option's Logic. Range 0-7
	0	No Reports Allowed
	1	Report to Destination 1
	2	Report to Destination 2
	3	Report to Destination 3
	4	Report to Destination 4
	5	Report to Destination 1 ,2, 3, 4
	6	Report to Destination 1 (2, 3, 4 backup)
	7	Report to Destination 1 (2 Backup) and 3 (4 backup)

Zone Bypass

If this option is enabled, the operator can bypass zones before arming the system. If this option is disabled, manual bypass of the zone will not be available. After manual bypass of the zone, a zone bypass report will be sent.

The zone bypass is valid in one arming period only and will be resumed after disarming. Before disarming, the bypassed zones will ignore all zone triggering and restoration events.

The key switch zone cannot be bypassed.

Forced Arming

If this option is selected, the system can be armed when the zone is in triggering status. If this option is not selected, the system will not allow the PIN holder to arm the system unless the zone with problems has resumed to normal status or been manually bypassed.

The arming with a zone in triggering status is called forced arming.

When the operating system arms:

– When the keypad or key switch zone is used to execute system arming, the system will show the zone status at first. If a zone in triggering status is not bypassed and the forced arming option is in disabled status, it cannot be successfully armed.
– When the keypad or key switch zone is used to execute system arming, the system will show the zone status at first. If a zone in triggering status is not bypassed and the forced arming option is in enabled status, the system will be successfully armed. If the zone is still not recovered at the end of the exit delay time, the system will show the fault report of the zone.
– When the fault is recovered, a zone recovery report will be sent.

The exceptions to forced arming option:

– In telephone and programming software remote arming, forced arming is available no matter the zone is programmed as enabled or disabled forced arming.

Silent Alarm

Enabling this option can set the zone to mute alarm. Silent alarm will not trigger the output of keypad buzzer and the output of the type of event of system audio alarm, but can trigger the output of the type of event of system alarm (both sound and silent) and the alarm event can still be transmitted according to programming path.

Zone Locking

The zone locking option of each zone can be set to a non-locking, 1 time of alarm locking, 3 times of alarm locking, 6 times of alarm locking and follow alarm time.

For unlocking, set the zone locking option to 0 to disable the zone locking function.

3 times of alarm locking

If the locking option is set to 2, the zone can only transmit up to 3 times of alarm report in each arming period. After zone re-disarming re-arming, the locking count will be reset.

The alarm control panel will process locking according to the following logic:

1. When the zone or zone tamper is trigger and siren alarm is resulted, within the period of alarm output time, the alarm control panel will ignore the status detection of the zone.
2. When the alarms reach 3 times, the zone will be locked.
3. If alarm occurs in the locked zone, the zone will send zone fault report.
4. Before the end of the alarm output time, ten zone recovery event will not be transmitted.
5. If the zone locking option is disabled, the times of alarms will not be restrained. Even when other zones are locked, that zone can still generate alarm.

6 times of alarm locking

Similar to 3 times of alarm locking, with alarm limited to not more than 6 times.

Locking within the period of alarm output time. Repeating the process of alarm locking in the period of alarm output time, without limit to times.

Zone Tamper

The system supports the tamper detection of the zone. This function ensures that the zone is in normal operating status. The process is as follows:

1. If 24-hour zone tamper is enabled, the wiring method for two-terminal resistor is required.
2. If the zone detects that the 24-hour tamper is triggered, the zone tamper alarm will be processed the same as 24-hour zone.
3. If the zone detests zone alarm, the zone will process according to specified zone type.

If the zone is programmed to disable 24-hour zone tamper, the wiring method for single-terminal resistor is required. If the zone detests alarm, the zone will process according to specified zone type.

Zone Status Reporting

The alarm control panel reports zone status according to the specified path, including alarm, zone fault, zone bypass and zone tamper alarm.

Zone Chime Mode

The system will support the chime mode.

The process is as follows:

– If the chime mode is used and a zone is triggered the keypad buzzer will sound for 1 second (only in disarmed status)

Zone Pulse count

The system will support the pulse count mode.

The process is as follows:

– pulse count duration time must be configured (Refer to chapter 9.1 Communication and Report Settings)
– pulse count for a zone can be set to a value between 1 and 9 (0 = disabled)

The process is as follows:

– an alarm is only created, if the zone is triggered as many times as the value “pulse count” within the time “count duration”.

Domestic No.

The system will support the domestic call mode.

The process is as follows:

– If the domestic call mode is configured for a zone and an alarm from this zone is created the alarm will be reported to the destination(s) configured and needs acknowledgement.

Cross Zone

The cross zone option works as follows:

Prerequisites:

– At least two zones in the same area have option Cross Zone enabled
– System option Cross Zone Timer is set to a value higher than 0

When one of these zones is triggered for more than 20 seconds, an alarm is created.

When one of these zones (the first zone) is triggered for a shorter time than 20 seconds, the cross zone timer starts, no alarm is created at this time.

- When no more zones (with cross zone option) are triggered within the cross zone time, no alarm is created.
- When the first zone is triggered twice or more within the cross zone time, no alarm is created.
- When a second zone or further zones (with cross zone option) is/are triggered within the cross zone time, then an alarm is created for all triggered zones.
- When the first zone or one of the other zones (with cross zone option) is/are triggered twice or more after cross zone time is expired, the timer restarts.

Unverified Alarm Report
Enables/disables option Unverified Alarm Report. When a cross zone is triggered, but no alarm is created, system creates an unverified alarm in order to report. System reports unverified alarms if option Unverified Alarm Report is enabled.

7.2.4 Adding and Changing Zone

Based on zone numbers, when adding or changing each zone, it is required to specify its area, select the zone functions and select the module of zone source.
When the zone is selected to 0, i.e., the zone is not used, any addresses set on the zone function and module selection are invalid.

7.2.5 Zone Indication Keypad and Event Log

Zones may be indicated on keypads and in event logs with a number that are different from zone number used for programming and hardware input.

One area system
Zones are indicated on keypads according to the zone numbers. When disable one zone the indication number of all following (higher) zone numbers will shift to a value decreased by one.

Multi area system
Only zones assigned to one area are indicated on an area keypad in the order beginning with 1 and by following the order of zone numbers.

Examples:
In a one are system keypad zone number 17 should be indicated on a 16 zone LED keypad. After disabling zone 16 (or another one in range 1 to 16) zone number 17 is indicated on keypad as number 16.

In a multi area system the following table shows area assignment and keypad indication of zones:

Zone Number	Area	Indication keypad area 1	Indication keypad area 2
1	2		1
2	2		2
3	1	1	
4	1	2	
5	1	3	
6	1	4	
7	2		3
8	2		4
9	2		5
10	2		6
11	1	5	
12	1	6	

7.3 Outputs

7.3.1 Onboard / Extension Output

The alarm control panel is equipped with four on-board outputs and supports two DX3010 output extension modules with each extension module supporting 8 relay outputs, 20 outputs in total.

When on-board output 1 or 2 fails due to a short circuit or open circuit, as long as there is a backup power supply, the output fault will not affect the normal operation of the whole system, but will be detected by the system.

Each output is programmable and can be set to follow multiple events.

Depending on the type of output event, the output parameters can be defined as area output or follow zone alarm output. The output polarity of each output can be programmed and defined as three modes: continuous output, pulse output or inverted.

The maximum time of each output is specified by programming and will be automatically reset after expiration.

Electrical characteristics: 13.65VDC ± 3%. For PO-1+2, Max 750mA; PO+3+4, maximum 500mA.

7.3.2 Output Events

0 - Not Used

1 - Disarmed 0=all areas, 1-16 = Areas1-16

The output operates on below conditions:

1. System disarmed after system reset
2. System operated the disarm command

The output is reset:

1. When the system is armed
2. When the output programmed duration is up

2 - System Armed 0=all areas, 1-16 = Areas1-16

The output operates on below conditions:

1. System armed after system reset

System operated the arm command and until system is armed. (When system is operating the arm command, the system will arm after the exit delay time is up.)

The output is reset:

1. When the system is disarmed
2. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the system disarmed.

3 - System Alarm

This output operates when an alarm occurs.

The output is reset:

1. When the system is disarmed and alarm is reset.
2. When the output programmed duration is up.

When a new alarm occurred, the alarm will reset the alarm time.

If this duration is programmed as 000, the output will continue till the zone restore or system disarmed.

4 - System Alarm (audile and silent)

In case of audio alarm of the system, the output will be enabled.

– Zone (alarm or tamper) programmed to disable zone silent alarm.
– System tamper / DX2010 tamper/keypad tamper.
– Keypad alarm (emergency alarm, fire alarm, medical aid alarm)

Or in case of silent alarm of the system, the output will be enabled.

– Zone (alarm or tamper) programmed to enable zone silent alarm. In case of following conditions, the output will be reset.
– Alarm reset.
– Arming of the system.
– Disarming of the system.

In case of new alarm event, the output time will be reset and re-timed.

When the output time is set to 000 and the alarm siren sounds for 0, the output will continue until reset of alarm output or disarming of the system by the command of [PIN] [3] [2] [#].

The output of the following system alarm is only 1 second:

– Alarm siren test.
– Pacing (tamper/alarm/reset).
– Key switch arming or- locking key switch disarming.

5 - External AWAY Siren

The output is triggered when:

System is AWAY armed +zone intruder alarm (intruder alarm = instant / interior instant / delay / interior delay / delay exit / interior delay exit / follower / interior follower / 24h (can be silenced) / Fire (can be silenced) / Technical Alarm (can be silenced))

System is AWAY armed +tamper alarm

(no alarm when panel is disarmed)

6 - External STAY Siren

The output is triggered when:

System is STAY armed +zone intruder alarm (intruder alarm = instant / interior instant / delay / interior delay / delay exit / interior delay exit / follower / interior follower / 24h (can be silenced) / Fire (can be silenced) / Technical Alarm (can be silenced))
System is STAY armed +tamper alarm
(no alarm when panel is disarmed)

7 - Internal Siren
The output is triggered when:
System is AWAY armed +zone intruder alarm (intruder alarm = instant / interior instant / delay / interior delay / delay exit / interior delay exit / follower / interior follower / 24h (can be silenced) / Fire (can be silenced) / Technical Alarm (can be silenced))
System is AWAY armed +tamper alarm
System is STAY armed +zone intruder alarm (intruder alarm = instant / interior instant / delay / interior delay / delay exit / interior delay exit / follower / interior follower / 24h (can be silenced) / Fire (can be silenced) / Technical Alarm (can be silenced))
System is AWAY armed +tamper alarm
System is disarmed +zone tamper alarm
When panel is armed = one pulse activation (1sec) (enabled/disable option can be combined with disarm)
When panel is disarmed = two pulse activation (1sec) (enabled/disable option can be combined with arm)
When Programming mode is entered = one pulse activation (1sec) (enabled/disable option)

8 - Internal Siren with tamper
The output is triggered when Internal Siren with tamper.

9 - Entry/Exit Delay Warning
Entry Delay Warning
This output operates during Entry Time.
The output is reset:
1. When the system disarmed
2. When Entry Time expires
3. When the output programmed duration is up.

Exit Delay Warning
This output operates during Exit Time when the control panel is armed.
The output is reset:
1. When the system is disarmed
2. When Exit Time expires
3. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the delay warning duration is up.

10 - Telephone Line Fault
This output operates when a telephone line fault occurs.
The output is reset:
1. When the Telephone line is restored and fault is reset.
2. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the telephone line is restored and fault is reset.

11 - AC Power Supply Fault

This output operates when a AC MAINS fault occurs.

The output is reset:

1. When the AC power supply is restored and fault is reset.
2. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the AC MAINS power is restored and fault is reset.

12 - Low Battery

This output operates when a Low Battery fault occurs.

The Dynamic Battery Test is performed every 4 hours after the system is powered up and every time the system is armed.

The output is reset:

1. Only after a Dynamic Battery Test report that the backup battery voltage is normal and fault is reset.
2. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till battery is restored and fault is reset.

13 - Tamper

This output operates when a Tamper condition occurs.

The output is reset:

1. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the Tamper condition is Restored and Tamper is reset.

14 - External Fault

This output operates when an External Fault occurs.

The output is reset:

1. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the External Fault is Restored and the fault is reset.

15 - All Faults

This output operates when a Fault occurs.

The output is reset:

1. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the Fault is Restored and the fault is reset.

16 - Fire Alarm

The output is triggered when Fire Alarm.

17 - Fire Reset

The output is triggered when Fire Reset.

18 - AWAY Armed

This output operates when System is AWAY Armed.

The output is reset:

1. When the output programmed duration is up.

If this duration is programmed as 000, the output will continue till the System is Disarmed.

19 - STAY Armed
This output operates when System is STAY Armed.
The output is reset:
1. When the output programmed duration is up.
If this duration is programmed as 000, the output will continue till the System is Disarmed.

20 - Reset
This output operates when a reset is performed in the system.

21 - Follow Zone Event Zone Number
The output follow type imitates the zone alarm state, when alarm or tamper is generated in the corresponding zone, the output will be enabled. When system arming, disarming or output time ends, the output will be reset.
For actual output time, See Table *The Value Ranges of Output Programming Options, page 125*

22 - RF Keyfob button 3
The output is triggered when Keyfob Button 3 is pressed.

23 - RF Keyfob button 4
The output is triggered when Keyfob Button 4 is pressed.

24 - Chime Indication
The output is triggered when Chime Indication.

25 - Verified Alarm
The output is triggered when Verified Alarm.

26 - Unverified Alarm
The output is triggered when Unverified Alarm.

27 - Technical Alarm
The output is triggered when Technical Alarm.

28 - Bypassed Zone
The output is triggered when Bypassed Zone.

29 - Ready to Arm
The output is triggered when ready to arm.

30 – Walk Test Output Mode
The output is triggered when Walk Test Output Mode.

7.3.3 Output Options

The Value Ranges of Output Programming Options

Output Event Type		Description	Output Area / Zone
Output Event	0	Not Used	No
	1	System Disarmed	0 = All Areas 1 – 16 = Areas 1 - 16
	2	System Armed	
	3	System Alarm	0 = Any Area, 1 - 16 = Areas 1 - 16
	4	System Alarm (audile and silent)	
	5	External AWAY Siren	
	6	External STAY Siren	
	7	Internal Siren	
	8	Internal Siren with tamper	
	9	Entry/Exit Delay Warning	1 - 16 = Areas 1 - 16
	10	Telephone Line Fault	
	11	AC Power Supply Fault	
	12	Low Battery	
	13	Tamper	0 = Any Area, 1 - 16 = Areas 1 - 16
	14	External Fault	
	15	All Faults	
	16	Fire Alarm	0 = Any Area, 1 - 16 = Areas 1 - 16
	17	Fire Reset	
	18	AWAY Armed	0 = All Areas 1 - 16 = Areas 1 - 16
	19	STAY Armed	
	20	Reset *1	0 = Any Area 1 - 16 = Areas 1 - 16
	21	Follow Zone Event	Zone Number 1 - 64
	22	RF Keyfob button 3 (Garage Door)	0 = Any Area, 1 - 16 = Areas 1 - 16
	23	RF Keyfob button 4 (light)	
	24	Chime Indication *1	
	25	Verfied Alarm	
	26	Unverfied Alarm	
	27	Technical Alarm	
	28	Bypassed Zone	
	29	Ready to Arm	0 = All Areas 1 - 16 = Areas 1 - 16

	30	Walktest	
Output Mode	0	Continuous output	
	1	Pulse	
	2	Inverted	
Output Time	000 - 999	0 - 999 seconds	

*1 Output Timer is fix. (1 sec)

Output Mode
Two different polarities are available.
0 - Continuous output
This polarity is a stable low-level output.
1 - Pulse output
This polarity is a pulse output.

Output Time
Each output can be specified output time and resets at the end of output time. Each output time occupies three programming addressess in seconds.
For example, to limit the output time of input 1 to 5 minutes, the programming address 0545-0547 can be programmed to [300], 300 seconds, i.e., 5 minutes.
The actual output time of system audio alarm, system alarm and follow zone event is related to alarm siren ringing.

7.3.4 Alarm Siren Ringing Time

The alarm siren ringing time is valid only when the keypad alarm tone is enabled. When there is audio alarm in the system, the alarm siren begins to ring. After valid arming/disarming command, alarm reset or alarm siren ringing time ends, the alarm siren stops ringing.
For programming of alarm time, see On board Output Programming.

7.4 Access Codes

This section describes the access codes used to assign privileges and access functions for User Code holders of the system. There are two types of access codes, the Installer Code and User Codes. Each of these codes allows specific access and operation of control panel functions.

7.4.1 Installer Code

The Installer Code can be up to six digits long. When the system is in disarmed status and no active alarm, it will access to Installer's Programming Mode.
Installer Code functions allow the installer to execute functions when the system is disarmed. Refer to *Section 6 System Functions, page 39* for more information. Refer to
Section 3.3.1 Programming with the AMAX Keypad 4000, page 14 for more information on system programming.
The installer code works only if it is enabled by a user code holder.

7.4.2 User Codes

The purpose of User Codes is to arm and disarm the system and perform system functions. The alarm control panel contains the following User Codes:

Keypad User Codes #1 to #64 (reported 1 to 64)
Key Fob User Codes *1 to *128 (reported 65 to 192)
User Codes for special purpose:
Use User Code 254 to send report when arming/disarming the system by key-switch user.
Use User Code 253 to send report when arming the system in AWAY Mode or STAY Mode by keypad single button.
Use User Code 252 to send report when remotely arming the system by telephone call.
Use User Code 251 to send report when remotely arming the system by A-Link Plus software.
User Code can be four to six digits long. Each User Code should get assignment to area(s) and to an authority level.

7.5 System Settings - General

This chapter describes eight categories of system settings including the system date and time, telephone settings, etc.

7.5.1 Installer Access Until Next Arming

Before using installer access, a standard user has to enable installer access first. If option Installer Access Until Next Arming is enabled, installer access permission is limited to next arming.

7.5.2 Force Arm When System Is In Trouble Condition

If option Force Arm When System Is In Trouble Condition is enabled, an area can be force armed however there is trouble condition.

7.5.3 Siren / PO-1+PO-2 Supervision

If option is enabled, system supervises whether siren is shortened or disconnected.

7.5.4 Keypad 2 Button Alarm

If option Keypad 2 Button Alarm is enabled, the following alarms can be sent by pressing and hold two keypad buttons simultaneously.
Emergency alarm will be transmitted, if simultaneously [1] and [3] or [*] and [#] is pressed and hold.
Fire alarm will be transmitted, if simultaneously [4] and [6] is pressed and hold.
Silent keypad emergency medical alarm will be transmitted, if simultaneously [7] and [9] is pressed and hold.

7.5.5 Phone Line Monitor

If option Phone Line Monitor is enabled, system supervises whether phone line is broken or disconnected.

7.5.6 Beep For Warning Devices

Enables/disables Beep For Warning Devices when the system is armed, disarmed or during Walk Test.

7.5.7 Silence Warning Device When Disarmed

Enables/disables Silence Warning Device when disarmed or by pressing any key.

7.5.8 Event Record Count per Set/Unset Period

Option Event Record Count per Set/Unset Period defines the maximum number of records for an event within the set/unset period.

7.5.9 System Tamper Indication In Area

Option System Tamper Indication In Area configures system where system tamper event is indicated. System tamper indication can be assigned to either the area where Zone 1 is located in or to all Areas.

7.5.10 Internal Siren Beep As Indication

Enables or disables Internal Siren Beep as Indication when the system is armed, disarmed or programming mode is entered.

7.5.11 Battery Check Interval

Option Battery Check Interval defines the time interval in which the battery test is carried out. Also battery test is carried out when armed or when system power up.

7.5.12 Cross Zone Timer

Option Cross Zone Timer defines time interval for the cross zone feature.

7.5.13 AC Power Supply Fault Report Delay

AC Power Supply Fault is reported with configurable delay time. Option AC Power Supply Fault Report Delay defines delay time.

7.5.14 Date and Time

The alarm control panel has a 24-hour clock and a 12-month calendar that need to be set during installation. The order is year, month, day, hour and minute, with each item occupying two digits [YY] [MM] [DD] [HH] [MM].
For more information about date and time settings, see Date and Time Settings .

7.5.15 Fault Inquiry

Fault and tamper conditions

1 Accessory Module Failure
1 Network / IP Module 1 Failure
1 - 2 Network / IP Module 1 - 2 Failure
2 Output Expansion Module Failure
1 - 2 Output Expansion Module 1 - 2 Fault
3 Input Expansion Module Failure
1 - 6 Output Expansion Module 1 - 6 Fault
4 Printer Failure
1 Module DX4010 Missing
2 Printer Missing
3 Printer Fault
5 RF Receiver Failure
1 RF Receiver 1 Fault
2 RF Receiver 1 Missing
3 RF Receiver 1 Jammed
6 RF Sensor Failure
1 RF Sensor Missing *
2 RF Sensor Fault *
7 RF Repeater Failure
1 - 8 RF Repeater 1-8 Missing
8 RF Config Failure
1 Configuration Conflict Sensors *
2 Configuration Conflict Repeaters *
3 Configuration Conflict Keyfobs *
2 Power Failure
1 Panel AC Failure
2 Panel Low Battery
3 Panel Aux Power Failure
1 - 2 Panel Aux Power 1 - 2 Fault
4 Bosch Option Bus Power Failure
1 - 2 Bosch Option Bus 1 - 2 Power Fault
5 RF Repeater AC Power Failure
1 - 8 RF Repeater 1-8 AC Power Fault
6 RF Repeater Battery Failure
1 - 8 RF Repeater 1-8 Battery Fault
7 RF Sensor Power Failure *
8 RF Keyfob Battery Failure *

* One or more faults occur in this category will light this led.

3 Output Failure	
1 Onboard Output Failure	
	1 Onboard Output 1 Fault
	2 Onboard Output 2 Fault
4 Keypad Failure	
1 - 16	Keypad 1 – 16 Fault
5 System Failure	
1	Date Time not set
6 Communication Failure	
	1 Communication Fault 1
	2 Communication Fault 2
	3 Communication Fault 3
	4 Communication Fault 4
	5 Phone Line Fault
7 Tamper	
1 System Tamper	
2 Keypad Tamper	
1 - 16	Keypad 1 – 16 Tamper
3 Zone Expansion Module Tamper	
1 - 6	Zone Expansion Module 1 - 6 Tamper
4 Zone Tamper DEOL	
1 - 16	Sensor Tamper DEOL
5 Zone type Tamper	
1 - 16	Zone type Tamper
6 Keypad Lock out	
	1 Keypad Lock out
7 RF Receiver Tamper	
	1 RF Receiver Tamper
8 RF Repeater Tamper	
1 - 8	RF Repeater Tamper
8 External Failure	
1 - 16	External Fault Zone 1-16

The system can display eight categories of 41 kinds of system failure.
For more information about fault inquiry, see Fault Inquiry.

Fault Description

1 - Accessory Module Failure

– **Network / IP Module 1 Failure**

Condition:
No communication with the DX4020/ITS-DX4020G if DX4020/ITS-DX4020G is programmed.
Restore:
Communication with DX4020/ITS-DX4020G is normal and fault is reset.
Supervise:

1. Report the DX4020/ITS-DX4020G fault to configured destination on address 124 when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **Output Expansion Module Failure**

Condition:
No communication with DX3010 if DX3010 is programmed.
Restore:
Communication with DX3010 is normal and fault is reset.
Supervise:

1. Report the DX3010 fault to configured destination on address 140 when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **Input Expansion Module Failure**

Condition:
No communication with DX2010 if DX2010 is programmed.
Restore:
Communication with DX2010 is normal and fault is reset.
Supervise:

1. Report the DX2010 fault to configured destination on address 140 when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **Printer Failure**

Module 4010 Missing

Condition:
No communication with DX4010 if printer is enabled.
Restore:
Communication with DX4010 is normal and fault is reset.
Supervise:

1. Report the DX4010 missing fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)

3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

Printer Missing

Condition:

No communication with printer if printer is enabled and the DX4010 is normal.

Restore:

Communication with printer and DX4010 are normal and fault is reset.

Supervise:

1. Report the printer missing fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

Printer Fault

Condition:

The printer is abnormal (e.g. printer no paper/printer buffer is overflow/...) if printer is enable and the DX4010 is normal.

Restore:

The printer and DX4010 are normal and fault is reset.

Supervise:

1. Report the printer error to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **RF Receiver Failure**

RF Receiver 1 Fault

Condition:

The receiver is abnormal (e.g. RF micro is removed/hold RF micro in reset/...) if wireless module is enabled.

Restore:

Communication with receiver is normal and wireless module is enabled and fault is reset.

Supervise:

1. Report the receiver fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

RF Receiver 1 Missing

Condition:

1. No communication with receiver if wireless module is enable.
2. Any RF zone or repeater or keyfob is configured but the wireless module is disable.

Restore:

Communication with receiver is normal and wireless module is enable and fault is reset.

Supervise:

1. Report the receiver missing fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)

3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault**.**

RF Receiver 1 Jammed

Condition:

Much disturb signal around the receiver if wireless module is enable.

Restore:

No much disturb signal around the receiver and wireless module is enable and fault is reset.

Supervise:

1. Report the receiver jam fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **RF Sensor Failure**

RF Sensor Missing

Condition:

Any one wireless zone no status report to receiver in the RF supervision interval and wireless module is enable.

Restore:

All wireless zones have status report to receiver in the RF supervision interval and wireless module is enabled and fault is reset.

Supervise:

1. Report the wireless zone missing fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

RF Sensor Fault

Condition:

Any one wireless zone is abnormal (e.g. Remove the pyro from the smoke detector/...) and wireless module is enable.

Restore:

All wireless zone are normal and wireless module is enabled and fault is reset.

Supervise:

1. Report the wireless zone fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **RF Repeater Failure**

1-8 RF Repeater 1-8 Missing

Condition:

No status report to receiver in the RF supervision interval and wireless module is enable.

Restore:

Have status report to receiver in the RF supervision interval and wireless module is enable and fault is reset.

Supervise:

1. Report the repeater missing fault to configured destination when the fault is detected.
2. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)

3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **RF Config Failure**

Configuration Conflict Sensors

Condition:
Any one wireless zone configuration is error.
Restore:
All wireless zone configuration are correct and fault is reset.
Supervise:
1. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
2. When the fault is reset, the FAULT indicator is turned off when there is no other system fault**.**

Configuration Conflict Repeaters

Condition:
Any one repeater configuration is error.
Restore:
All repeater configuration are correct and fault is reset.
Supervise:
1. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
2. When the fault is reset, the FAULT indicator is turned off when there is no other system fault.

Configuration Conflict Keyfobs

Condition:
Any one keyfob configuration is error.
Restore:
All keyfob configuration are correct and fault is reset.
Supervise:
1. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
2. When the fault is reset, the FAULT indicator is turned off when there is no other system fault.

2 - Power Failure

The zone indicator 2 lights to indicate Power Faults. Enter [2] to step to Power Faults list for more information.

– **Panel AC Failure**

Condition:
1. 18V AC supply deficiency to panel caused by transformer.
2. 220V power supply fuse broken.
3. 220V power supply disconnected.
Restore:
AC MAINS supply is reconnected and fault is reset.
1. Monitor the voltage by MPU.
2. If the AC fault is not restored in 1 hour after the fault occurred, report the fault to configured destination on address 124.
3. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
4. As the AC supply is reconnected, the MAINS indicator is back to light (except in Programming Mode or Code Functions Mode).

1. When the fault is reset, send the restored report to the configured destinations.

– **Battery Low Battery**

Condition:
1. Battery voltage is lower than 11V+-1%.
2. No battery connected.
Restore:
When Battery voltage rises to 12V+-1%, Dynamic Battery test is performed (time set in Programming address 204) and fault is reset.
Supervise:
1. The system performs a Dynamic Battery Test every time (set in address 204) and every time the system is armed or reset.
2. Report the low battery to the configured destination programmed on address 124.
3. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators)
4. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **Panel Aux Power Failure**

Condition:
Aux Power Supply Voltage is lower than 9V.
Restore:
Voltage is raised to 12 and fault is reset.
Supervise:
1. Monitor the voltage by MPU.
2. Report the AUX power fault to the configured destination programmed on address 124.
3. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
4. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **Bosch Option Bus Power Failure**

Condition:
Bosch option bus power supply Voltage is lower than 9V+-5%.
Restore:
Voltage is raised to 12V and fault is reset.
Supervise:
1. Monitor the voltage by MPU.
2. Report the Bosch Option Bus Power Supply fault to the configured destination programmed on address 124.
3. Slow flash FAULT indicator (refer to the detailed description in chapter keypad indicators)
4. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

– **RF Repeater AC Power Failure**

No description defined

– **RF Repeater Battery Failure**

No description defined

– **RF Sensor Power Failure**

No description defined

– **RF Keyfob Battery Failure**

No description defined

3 -Output Failure

– **Onboard Output Failure**

On-board output 1 to 2 fault

The on-board output 1 to 2 is detected as short circuit, open circuit or over current status, the on-board output 1 to 2 fault will occur. After the output is recovered and Reset command executed, the fault will be recovered.

Fault conditions:

When the output is at short circuit, open circuit or over current status, the fault occurs.

Recovery conditions:

After the output is recovered, the fault will be recovered.

Fault monitoring:

1. The on-board output 1 to 2 fault is detected, the report will be sent to the relevant path.
2. The fault indicator on the keypad flashes slowly
3. When the on-board output 1 to 2 fault recovers, the report will be sent to the specified path. If currently there are not other faults and Reset command executed, the fault indicator of the keypad will go off.

4 -Keypad Failure

Condition:

Keypad fail is reported at any time when communication fails between the panel and address 1 keypad.

Restore:

Communication between panel and keypads comes back to normal and fault is reset.

Supervise:

1. Report the keypad fault to the configured destination programmed on address 124.
2. Flash FAULT indicator on the other keypad in normal operation (refer to the detailed description in chapter keypad indicators).
3. Keypad missing communication with the panel performance as below:
   - Stop detection on the keypad button
   - Flash FAULT indicator
   - The disconnected keypad do not sound FAULT beeping per minute
4. When the keypad fault is reset, send the restore report to the configured destinations.

The FAULT indicator is turned off when there is no other system fault.

5- System Failure

– **Date and Time not set**

Condition:

Date and time is not set after the system is powered on.

Restore:

Date and time is programmed and the fault is reset. Refer to Section 3.1.1 Setting date and time for more information.

Supervise:

1. Report the date and time fault to the configured destination programmed on location 124.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators)

3. No report to the control panel system when date and time setting is recorded in nonvolatile memory and Control Panel is reset. The FAULT indicator is turned off when there is no other system fault.

6 - Communication Failure

– **Communication Fault 1 - 4**

Condition:
Panel can not send the report to the Destination 1 after 4 attempts.
Restore:
The fault is reset when the first kissoff tone is received and fault is reset.
Supervise:
1. Report the fault to configured destination on address 124 when the fault is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

7- Tamper

The zone indicator 7 lights to indicate Tamper conditions. Enter [7] to step to Tamper conditions list for more information.

System Tamper

Onboard Tamper Condition is registered when the Onboard Tamper input (P8) is open.
Condition:
Onboard Panel Tamper input P8 is open.
Restore:
The Tamper condition is reset when the Input is shorted and Tamper condition is reset.
Supervise:
1. Report the Tamper condition to configured destination on Address 124 when the Tamper Condition is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Tamper Condition is reset, send the restored report to the configured destinations.

Keypad Tamper

Condition:
Keypad 1 is opened and the Tamper contact is triggered.
Restore:
The Tamper condition is reset when the Keypad is closed and Tamper condition is reset.
Supervise:
1. Report the Tamper condition to configured destination on Address 124 when the Tamper Condition is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Tamper Condition is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

Zone Expansion Module Tamper

Zone extension module 1 to 6 tamper
When the disassembly of DX2010 module 1, 2, 3, 4, 5 or 6 is detected, zone extension module 1, 2 tamper report will be sent. When the module resumes to normal operation, the fault recovery report will be generated.
Fault conditions:
When the disassembly of DX2010 module 1, 2, 3, 4, 5 or 6 is detected, the alarm control panel will consider the occurrence of zone extension module 1, 2, 3, 4, 5 or 6 tamper.

Recovery conditions:
When the module tamper recovers, tamper 1, 2, 3, 4, 5 or 6 will be recovered. Fault monitoring:
When the DX2010 module 1, 2, 3, 4, 5 or 6 tamper is detected, the report will be sent to the relevant path according to programming address 0124.
The fault indicator on the keypad flashes slowly
When module 1, 2, 3, 4, 5 or 6 tamper is recovered, the report will be sent to the specified path.
If currently there are not other faults, the fault indicator of the keypad will go off.

Zone Tamper DEOL
Condition:
Tamper contact is triggered (Zone is programmed as Dual End of Line)
Restore:
Tamper contact is restored and Tamper condition is reset.
Supervise:
1. Report the Sensor Tamper to configured destination on Address 124 when the Sensor Tamper is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Tamper condition is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

Zone type Tamper
Condition:
Tamper contact (direct connected to the Zone) is triggered (Zone type = Tamper)
Restore:
Tamper contact is restored and Tamper condition is reset.
Supervise:
1. Report the Tamper condition to configured destination on Address 124 when the Tamper condition is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Tamper condition is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

Keypad Lock out
Condition:
Invalid code is entered more times than allowed by the code retry attempts (programmed in address 0499)
Restore:
Keypad lock out is reset when the Keypad lockout time (3min) is expired and the fault is reset.
Supervise:
1. Report the Keypad lock out to configured destination on Address 124 when the Keypad lock out is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Keypad lock out Condition is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

RF Receiver Tamper *No description defined*
RF Repeater Tamper *No description defined*

8 - External Failure

Condition:

Fault contact (direct connected to the Zone) is triggered (Zone type = External Fault)

Restore:

Fault contact is restored and Fault condition is reset.

Supervise:

1. Report the Fault condition to configured destination on Address 124 when the Fault condition is detected.
2. Slow flash FAULT indicator (refer the detailed description in chapter keypad indicators).
3. When the Fault is reset, send the restored report to the configured destinations. The FAULT indicator is turned off when there is no other system fault.

External Fault Zone

The zone indicator 8 lights to indicate External Fault conditions.

Enter [8] to step to Zone Indicator list to identify the zone where the fault input is connected.

1=Zone 1 2=Zone 2 3=Zone 3 4=Zone 4 5=Zone 5 6=Zone 6 7=Zone 7 8=Zone 8

See also

– *Address Setting, page 11*

7.5.16 Quick Arming

Without any PINs, system quick arming can be made by pressing and holding the keypad [#] for 3 seconds, or the quick perimeter arming can be made by pressing and holding the keypad [*] for 3 seconds.

7.5.17 Keypad Settings

Keypad Alarm Tone

In case of alarm, if the keypad buzzer is required to prompt alarm, the location 0503 should be set to 1 in order to output following the system audio alarm event of its area. The default is to disable keypad alarm tone.

If keypad alarm tone is enabled, the keypad will alarm following the alarm siren ringing time and stop alarming after completion of the alarm siren ringing time or through resetting of alarm output.

For keypad alarm tone programming, see On board Output Programming .

Times of Keypad Locking

When the times of entering wrong code exceeds the limit for entry of wrong code programmed in location 0499, all keypads will be locked. The locking time is fixed at 3 minutes.

7.5.18 Fault Report Settings

Fault Prompt Tone

When the command [2] [1] is used for fault inquiry, the keypad can be programmed to sound prompt tone to indicate new system fault. The system is defaulted to enable. In case of new fault, all keypads will sound short beep once a minute.

Exit Delay Alarm or Fault

When the delay zone or the following zone completes the exit delay, it is possible to choose to trigger alarm or fault.

AC Fault Report Settings
In case of AC power fault, the fault report will be delayed for 1 hour or 10 minutes, or transmitted along with other reports. The AC power fault event will be displayed on the keypad 1 hour or 10 minutes later.

Fault Display Settings
In case of date/time settings fault, it is possible to choose to display the fault or transmit fault prompt tone at the same time, or do not display and stop fault prompt tone. If it is chosen not to display, even the fault prompt tone is set, the system will prompt nothing if no date and time are set after power-up.

Version Information
This setting can be used to display the version number of the alarm control panel software.

Restoring to Default Settings
This setting can be used to restore all programming parameters set in the factory.

7.5.19 Zone Tamper Bypass when DEOL Zone is Bypassed

If Parameter Zone Tamper Bypass when DEOL Zone is Bypassed is enabled, system creates a tamper alarm when DEOL zone is tampered, even when this zone is bypassed. Modify address 0184 in order to change parameter. This function is only accessible in address programming. Also refer to Chapter *Dual IP Settings, page 107* for more details.

7.6 System Settings - RF Options

RF Receiver Functionality
Enables or disables RF receiver functionality

RF Supervision Interval
Defines RF Supervision Interval

RF Jam Detect Level
Defines RF jam detect level

RF Device Low Level Battery Resound
Enables or disables RF device low level battery resound

Chirp On Arm / Disarm
Enables or disables chirp on arm / disarm

Keyfob Panic Option
Defines keyfob panic option

7.7 Area Settings

7.7.1 Common Area

Area 1 can be used as a common area or an independent area. Common area ancillary acts as follows:

– Only all belonged independent areas are armed, the common area can be armed.
– When a relevant ancillary area is perimeter arming, the common area will be perimeter arming too.
– When a relevant ancillary area is disarmed, the common area will be armed.

– If any zones under common zones are in triggered or tamper status and the forced arming is disabled, the common area cannot be armed.

For programming of common area, see Common Area Settings.

7.7.2 Area Delay

Exit Delay

As for the programming of exit delay, the programming rang is 0 - 255 seconds. In the mode of system arming, the keypad will beep during exiting and will make continuous long beep in the last 10 seconds to notify the exit time is coming to an end.

For programming of exit delay, see Exit Delay.

Entry Delay

As for the programming of entry delay, the programming rang is 0 - 255 seconds. Entry delay id the delay time of the delay zone.

For programming of exit delay, see Entry Delay.

For more information about delay zone, see Delay zone.

7.7.3 Keypad Area

Master Keypad

The system supports up to 16 master keypads. The arming/disarming, area alarm, AC power fault, system fault and system event of each area can be displayed on the master keypad. It is not possible to execute arming/disarming and bypass operation on the master keypad. When relevant operations are made to the area, the master keypad should be switched to the corresponding area.

Area Keypad

It is possible to operate each area with a single or multiple independent keypads.

Each area keypad can only operate the corresponding area of the programming,

When the area keypad has not corresponding zones, the area keypad cannot be used to execute zone-related operations such as arming/disarming and bypass, but can be used to execute operations without relations to the zone, e.g. event inquiry.

Each area keypad can display the status of the zone belonging to the area. However, for IUI-AMAX3-LED8 keypad, IUI-AMAX-LED8 keypad and IUI-AMAX-LCD8 keypad, each area can display up to 8 zones and cannot display other zones, but can report zone events. For IUI-AMAX3-LED16 keypad, each area can display up to 16 zones and cannot display other zones, but can report zone events. The keypad can display up to 64 zones.

For any areas, the logic numbers of the zones are displayed on the LED/Icon LCD keypad and logic numbers or zone names of the zones are displayed on the keypad instead of actual physical numbers. For example: The zones 1, 2 and 3 of area 1 displayed on the keypad are actually zones 20, 31 and 37.

For programming of keypad specified area, see Keypad Area Settings.

8 Configuration

This chapter specifies how to configure of the AMAX panel 4000. It includes the different ways to program the AMAX panel 4000.

8.1 System Power Up

After the system is powered up, set date and time. Otherwise, the system prompts as fault.
After the system is powered up or reset, it resets to previous arming / disarming status.
To reduce false alarms caused by system power-up (or by power supply restoration after both mains supply and AUX power supply fail), the system is designed to not perform zone test within one minute after power-up.

8.2 System Status Indicator

The system status is indicated by the LED status indicator on the system main board.
Slow flash of red status indicator (repeating on and off with an interval of 1 second) indicates normal system operation.

8.3 Installer and User Code Commands

The system supports programmable 4- to 6-digit Installer and User Code to execute the following programming and operating commands.
The installer commands can be used only when all areas of the system are in disarming status with no alarm activated and when installer access is enabled from user.

Notice!
No identical User Codes are allowed. User Codes are not permitted to be the same as Installer codes.

User Code Commands

Function	Command (Default User Code = 2580 Default Inst. Code = 1234)	Duress User	Arming User	Basic User	Super User	Master User	Instal. User
Switch to Main Keypad	[Code] + [0][0][0] + [#] (Text KP)				√	√	
Switch to Partition 01-16	[Code] + [0][_][_] + [#] (Text KP)				√	√	
AWAY arm	[Code] + [1][1] + [#] / [Code] + [#] / [#] (Quick arm)	√	√	√	√	√	√
STAY arm	[Code] + [1][2] + [#] / [Code] + [*] / [*] (Quick arm)	√	√	√	√	√	√
Disarm	[Code] + [#]	√		√	√	√	√
Display Info (Fault/Tamper..)	[Code] + [-]					√	√
Keypad Emergency Alarm	Long press [1] and [3] or [*] and [#]						
Keypad Fire	Long press [4] and [6]						
Keypad Medical Alarm	Long press [7] and [9]						
Fault/Tamper Inquire	[Code] + [2][1] + [#]				√	√	√
Check All Event Log	[Code] + [2][2] + [#]				√	√	√
Check EN Event Log	[Code] + [2][3] + [#] (Text KP)				√	√	√
Check Dialer Event Log	[Code] + [2][4] + [#] (Text KP)				√	√	√
Zone Bypass/Cancel	[Code] + [3][1] + [#] + [Zone No] [*] + [#] (Bypass)			√	√	√	√
	[Code] + [3][1] + [#] + [Zone No] [*] + [#] (Cancel LED)			√	√	√	√
	[Code] + [3][2] + [#] + [Zone No] [*] + [#](Cancel Text KP)			√	√	√	√
Bypass Inquire	[Code] + [3][3] + [#] (Text KP)			√	√	√	√
Bypass Fault/Tamper	[Code] + [3][4] + [#]			√	√	√	√
Siren test	[Code] + [4][1] + [#]				√	√	√
Communication test	[Code] + [4][2] + [#]				√	√	√
Walk test	[Code] + [4][3] + [#]				√	√	√
Change/View date/time	[Code] + [5][1] + [#]						√
Daylight Saving Time (+1h)	[Code] + [5][2] + [#]				√	√	√
Daylight Saving Time (-1h)	[Code] + [5][3] + [#]				√	√	√
Add / Delete / Change User	[Code] + [5][4] + [#]					√	√
Change Individual Code	[Code] + [5][5] + [#]	√	√	√	√	√	√
Change Domestic Phone No.1	[Code] + [5][6][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.2	[Code] + [5][6][#][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.3	[Code] + [5][6][#][#][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.4	[Code] + [5][6][#][#][#][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.1-4	[Code] + [5][6][#] + [_] + [#] + [_ _ _ _ _ _][#] (Text KP)						√
Call Back	[Code] + [5][7] + [#]						√
Change Language	[Code] + [5][8] + [#] + [_] [_] + [#] 01=EN 02=DE 03=ES 04=FR 05=IT 06=PL 07=NL 08=SE				√	√	√
Reset tamper or fault	[Code] + [6] + [#]				√	√	√
Installer Access	[Code] + [7][1] + [#] (Enable) [Code] + [7][2] + [#] (Disable)					√	
System reset	[Code] + [9][9][8][9] + [#]				√	√	√
Installer program mode	[Code] + [9][5][8] + [#]						√
Exits Progr. mode without save	[9][5][9] + [#] (only in Adress Progr. Mode)						√
Exits Progr. mode with save	[9][6][0] + [#] (only in Adress Progr. Mode)						√
Set Factory Defaults	[9][6][1] + [#] (only in Adress Progr. Mode)						√
Copy control panel data to progr. Key	[9][6][2] + [#] (only in Adress Progr. Mode)						√
Copy progr. key data to control panel.	[9][6][3] + [#] (only in Adress Progr. Mode)						√
Display FW version	[9][9][9] + [#] (only in Adress Progr. Mode)						√

Figure 8.1: User Code Commands

8.4 Reset to Factory Default Settings

The factory Default can be reset with the ‘Resetting to Factory Default’ pads on the main board of the control panel.

1. Disconnect the AC power supply and backup battery to the control panel.
2. Short-circuit the ‘Resetting to Factory Default’ pads.
3. These set of pads are located at the top on the printed circuit board of the control panel.
4. Powering up is done when the bonding pads are short-circuited.
5. Quick flash of the red LED indicator on the printed circuit board of the control panel indicates that the factory Default will be reset.
6. All programming parameters are reset to factory default immediately after releasing the short-circuited bonding pads.

Notice!

If the DEFAULT pads are short-circuited for over 10 seconds after power-up, the control panel will discard resetting to factory Default.

8.5 Programming with Keypad

8.5.1 LCD Keypad Menu Programming

1. Enable Text keypad and confirm that the system is in disarmed status.
2. Enter Installer Code + [958] and press [#] to get to [Installer Menu].
3. Programming: Select the menu and operate according to the menu prompt.
   - Down to the next menu: Press [▼]
   - Up to the previous menu: Press [▲]
   - Enter menu or confirm input: Press [#]
   - Back to the menu or delete a single input: Press [-]; or press and hold [-] for 3 seconds to end the input state and get back to the menu.
   - Operate according to the menu prompt. Select menu and enter data for specific programming items according to the display on the keypad to complete programming, step by step.
   - The data value ranges in the menu programming and address programming are the same. For specific options and value ranges, see contents in LCD Keypad Menu Programming.
4. After completing input, press [-] to get back to the previous menu. Complete all programming input by repeating step 3 and press [-] to get back to the current main menu level by level.
5. Press [-] to enter menu options. It is optional to save or not to save the programming information.
6. Select [Save and Exit] and press [#] to save system programming data, exit menu programming and reset system.

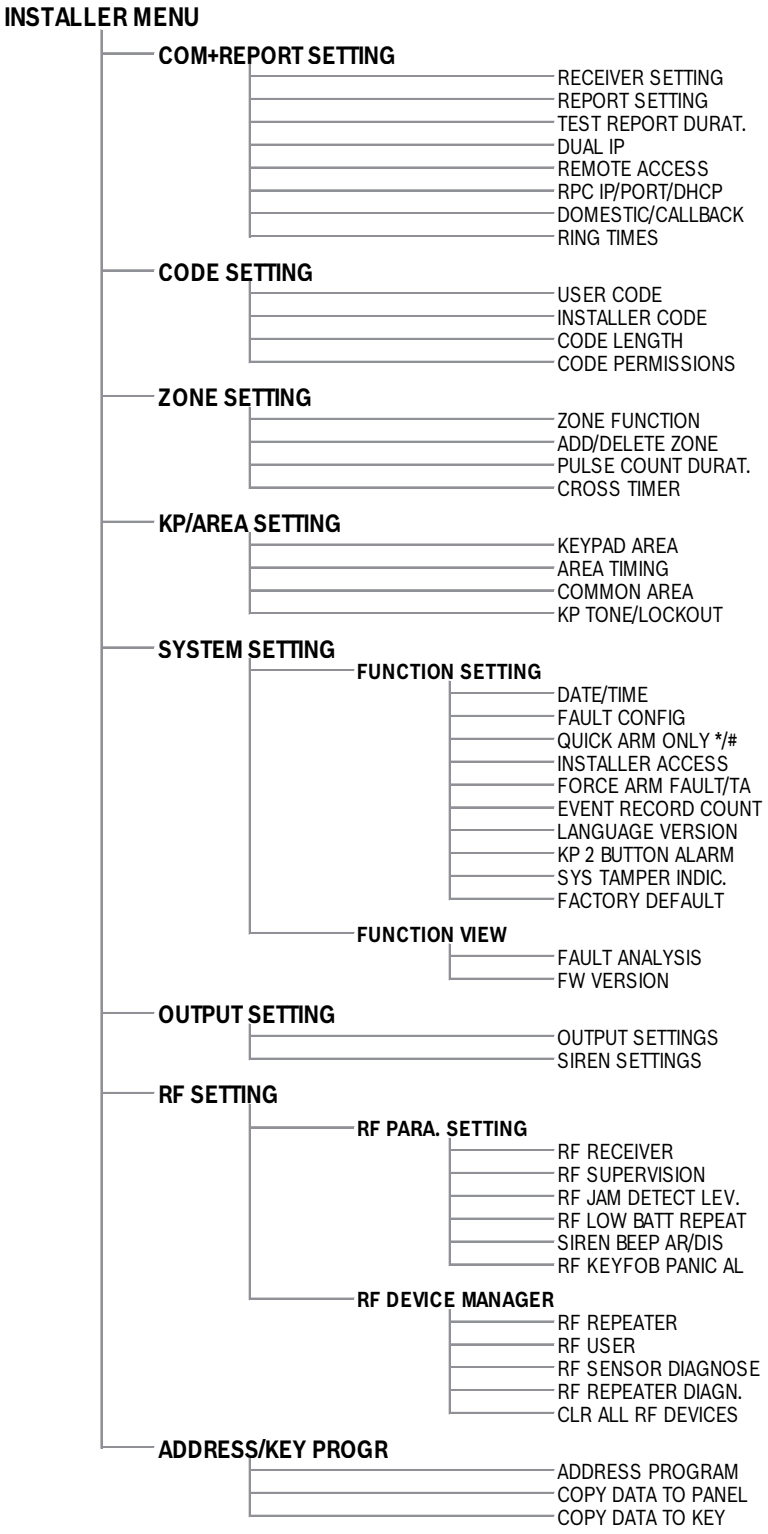


Figure 8.2: Menu Structure

Warning!

Programming parameters must be set within the value range in the programming address. Otherwise, the system will turn to indeterminate status.

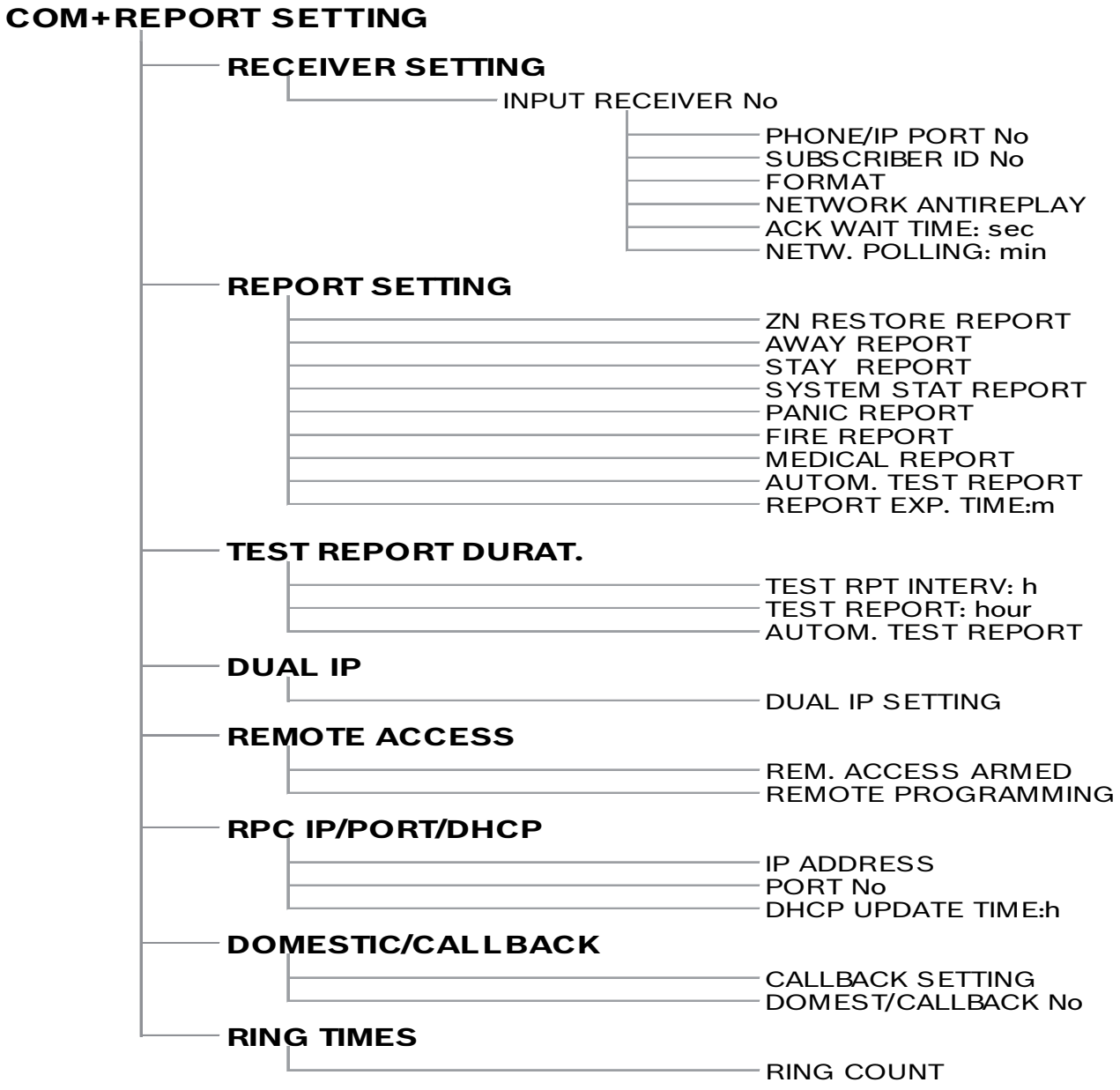


Figure 8.3: Com+Report

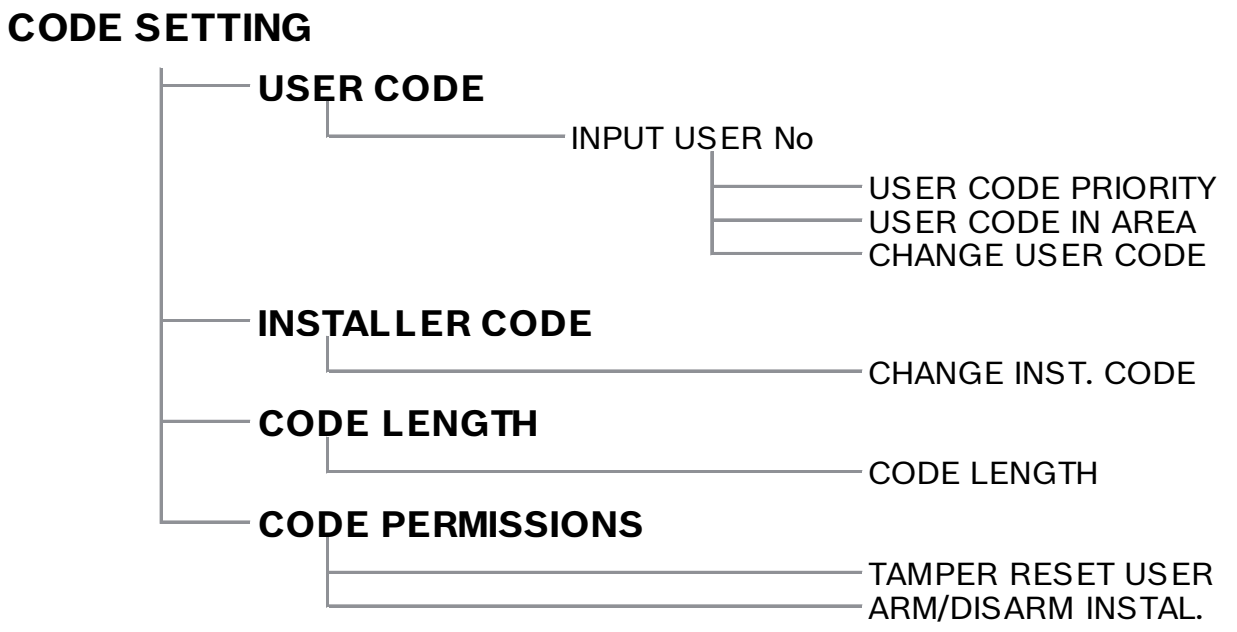


Figure 8.4: Code Setting

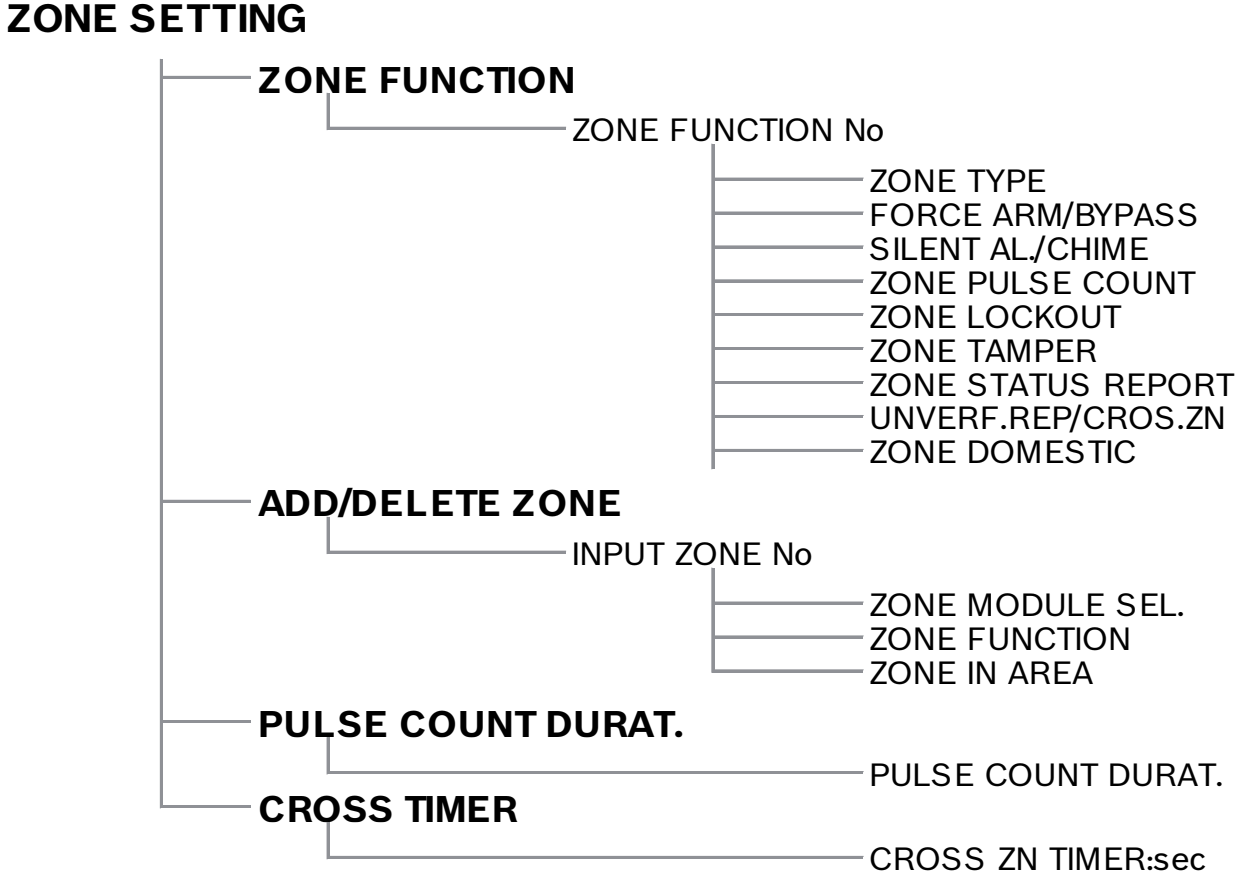


Figure 8.5: Zone Setting

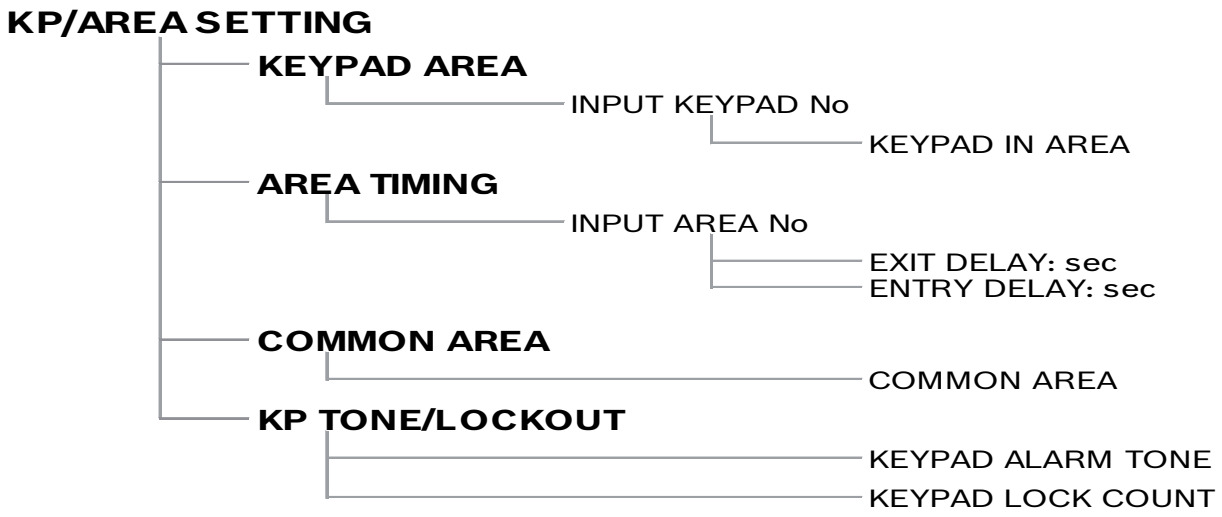


Figure 8.6: KP Area Setting

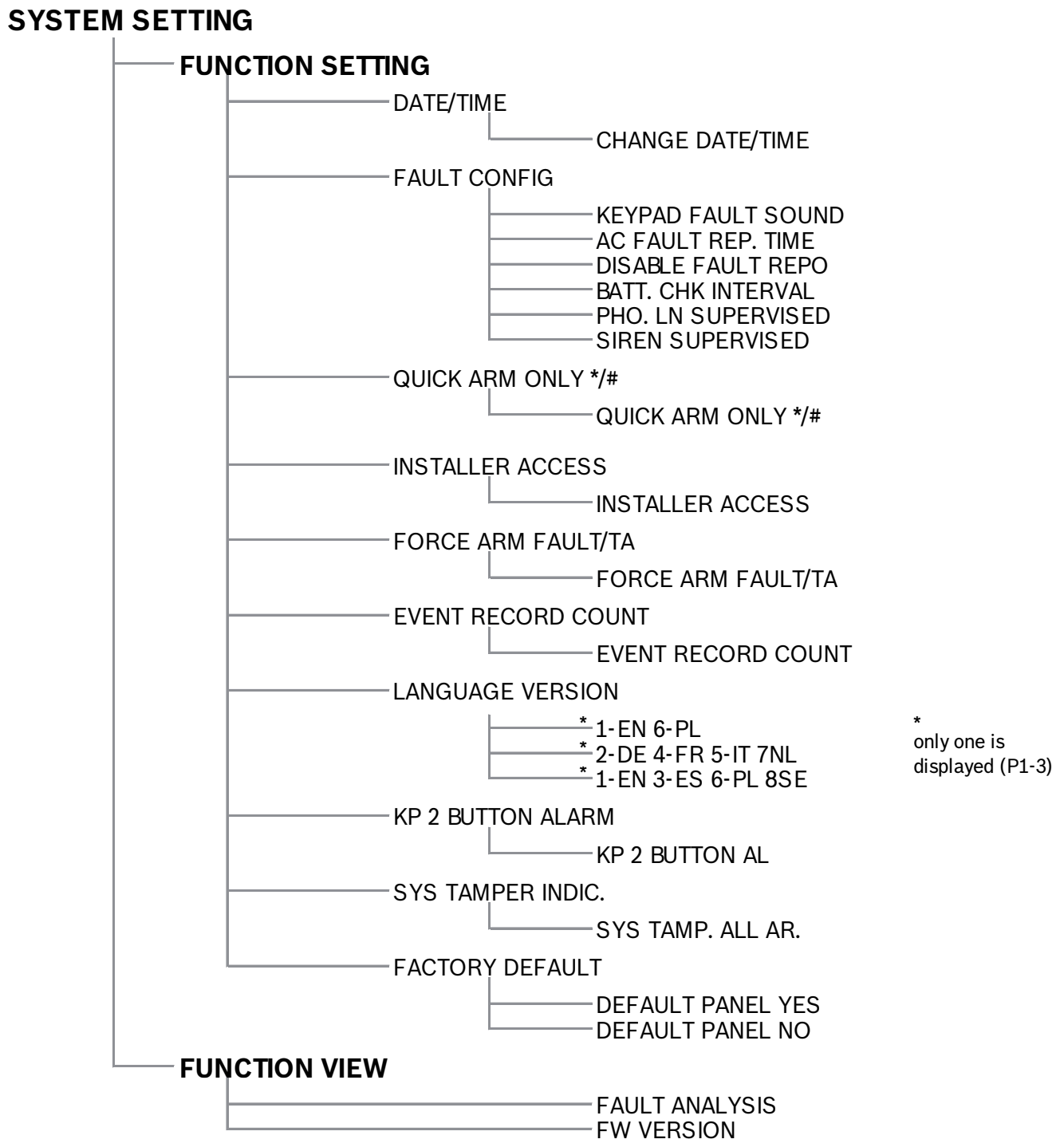


Figure 8.7: System Setting

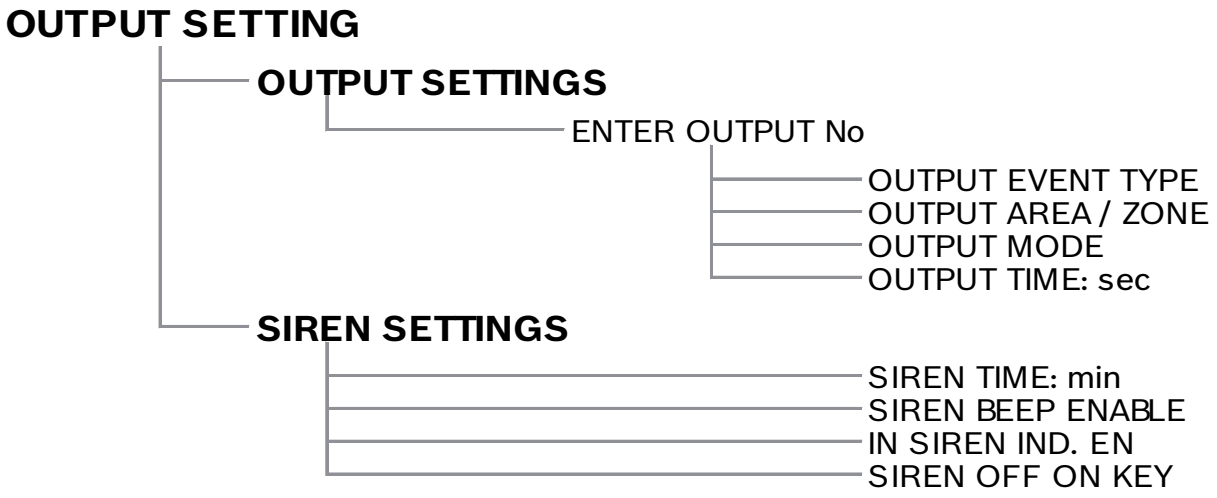


Figure 8.8: Output setting

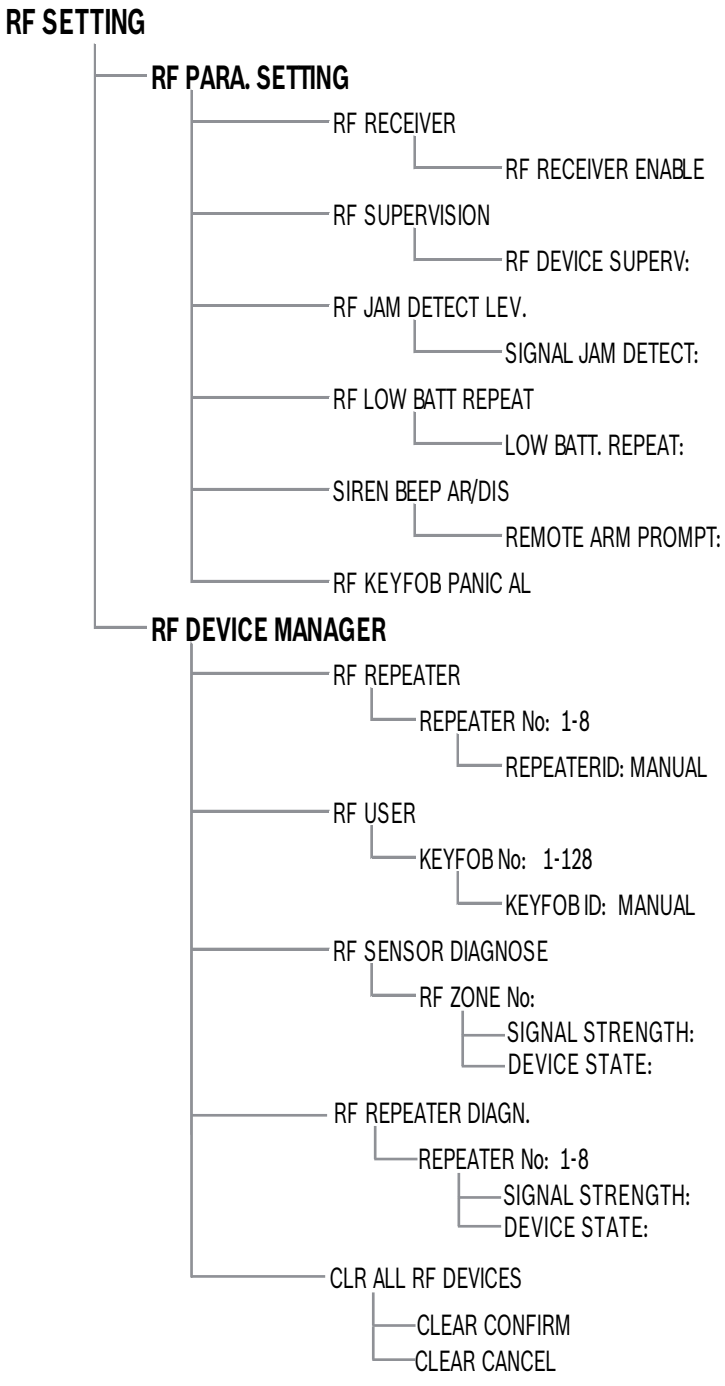


Figure 8.9: RF Setting

Figure 8.10: Address Key Progr

8.5.2 LED/LCD Keypad Programming

1. Enable LED keypad or Icon LCD keypad and make sure that the system is in disarmed status.
2. Enter programming mode: Enter the Installer Code (the default is 1234) + [958] and press [#].
3. Programming: Move to the required address and enter the value for each data bit (data value).
   - After entering programming mode, the system directly enters the programming data in the address 0000 (Receiver 1 telephone number or the initial digit of the IP address), then
   - Enter the next address: Press [#]
   - Back to the previous address: Press [*]
   - Skip to other address: Enter the address code and press [#]
   - Set new data in the address: Enter new data values and press [*]
   - Enter new data values as required. Otherwise, the factory Default will be used in the system.
4. Exit programming mode: Enter Command [9] [6] [0] and press [#] to save programming data. Entering [9] [5] [9] + [#] means not to save the programming data.

For LED/Icon LCD keypad, the programming data is displayed by the keypad indicator. See Programming Data Indicators.

Notice!

For LED/Icon LCD keypad, when the programming data exceeds the display range of the keypad indicator, there will be no display on the keypad.

Programming Data Indicators

Data	**Zone Indicators**								
Value	1	2	3	4	5	6	7	8	**Mains**
0									
1	X								
2		X							
3			X						
4				X					
5					X				
6						X			
7							X		
8								X	
9	X							X	
10									X
11	X								X
12		X							X
13			X						X

14				X					X
15					X				X

8.6 PC Programming

By means of Remote Programming Software (RPS) installed on a remote PC (RPC), the Control Panel Configuration can be remotely programmed or controlled, including sending/receiving programming data, arming/disarming each area, enabling/disabling the alarm siren of each area, enabling/disabling each remote output, etc.
RPS, i.e., Remote Programming Software, includes Bosch A-Link Plus software and the third-party software of integrated with Bosch SDK.
This software allows you to simply program and control the Control Panel Configuration of the customer in the office and provide more efficient service for the customer.
The connection from the remote PC to the Control Panel Configuration can be established through either USB line, telephone or IP network.

Prerequisites for all following ways of connections:
Select index sheet “Control Panel Configuration”. Refer to figure , *page 92*
– Make sure that Control Panel Type is “AMAX4000”.
– Make sure that the value for Subscriber Number of Destination 1 is the same as currently programmed in AMAX panel 4000. The value is 000000, when firmware of AMAX panel 4000 was upgraded or AMAX panel 4000 has factory settings.

Select item “System Options” in the same index sheet. Refer to figure , *page 93*
– Make sure that the value for parameter “Installer code” is the same as currently programmed in AMAX panel 4000. The value is 1234, when firmware of AMAX panel 4000 was upgraded or AMAX panel 4000 has factory settings.

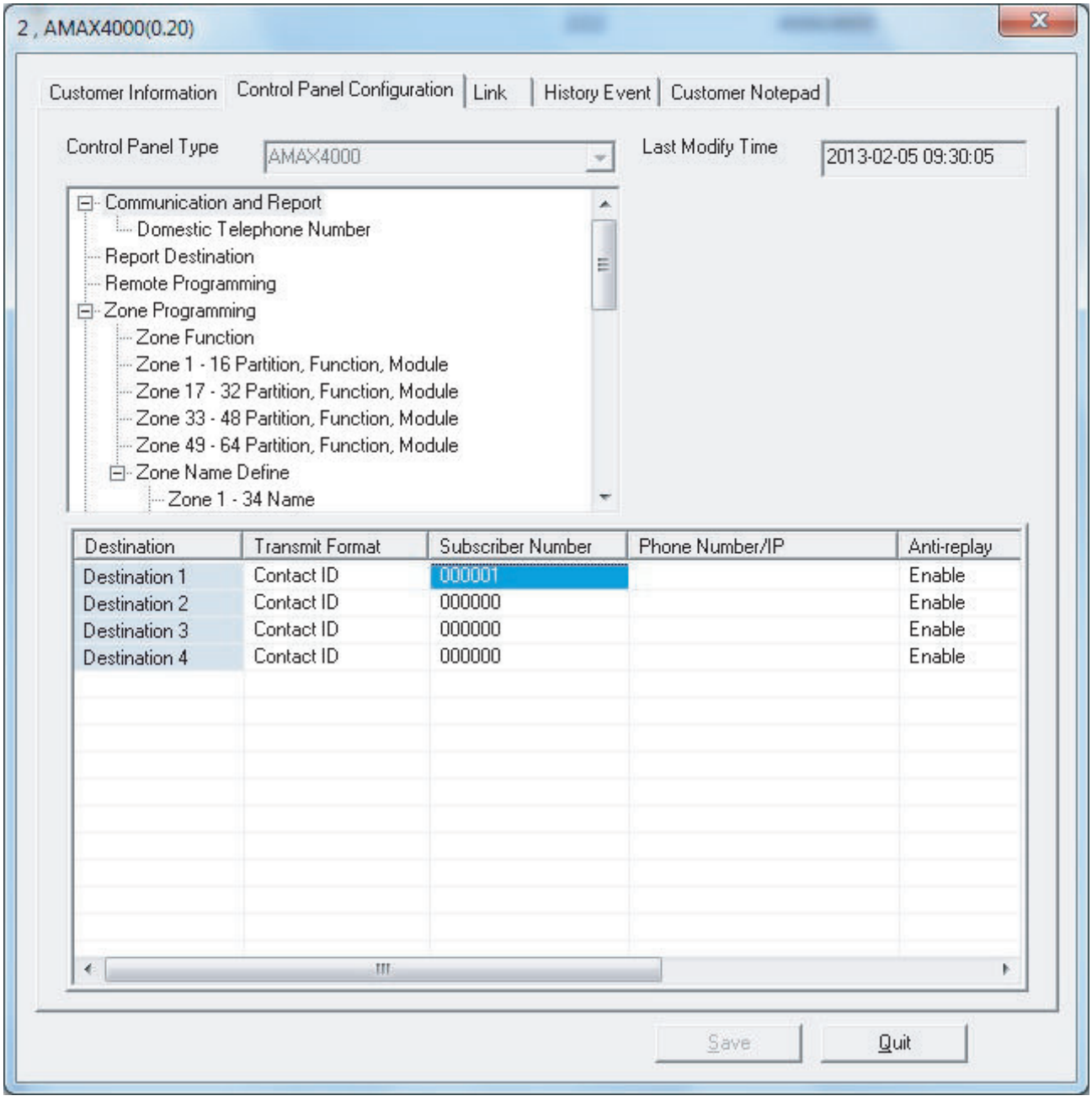


Figure 8.11: Control panel configuration- Destination

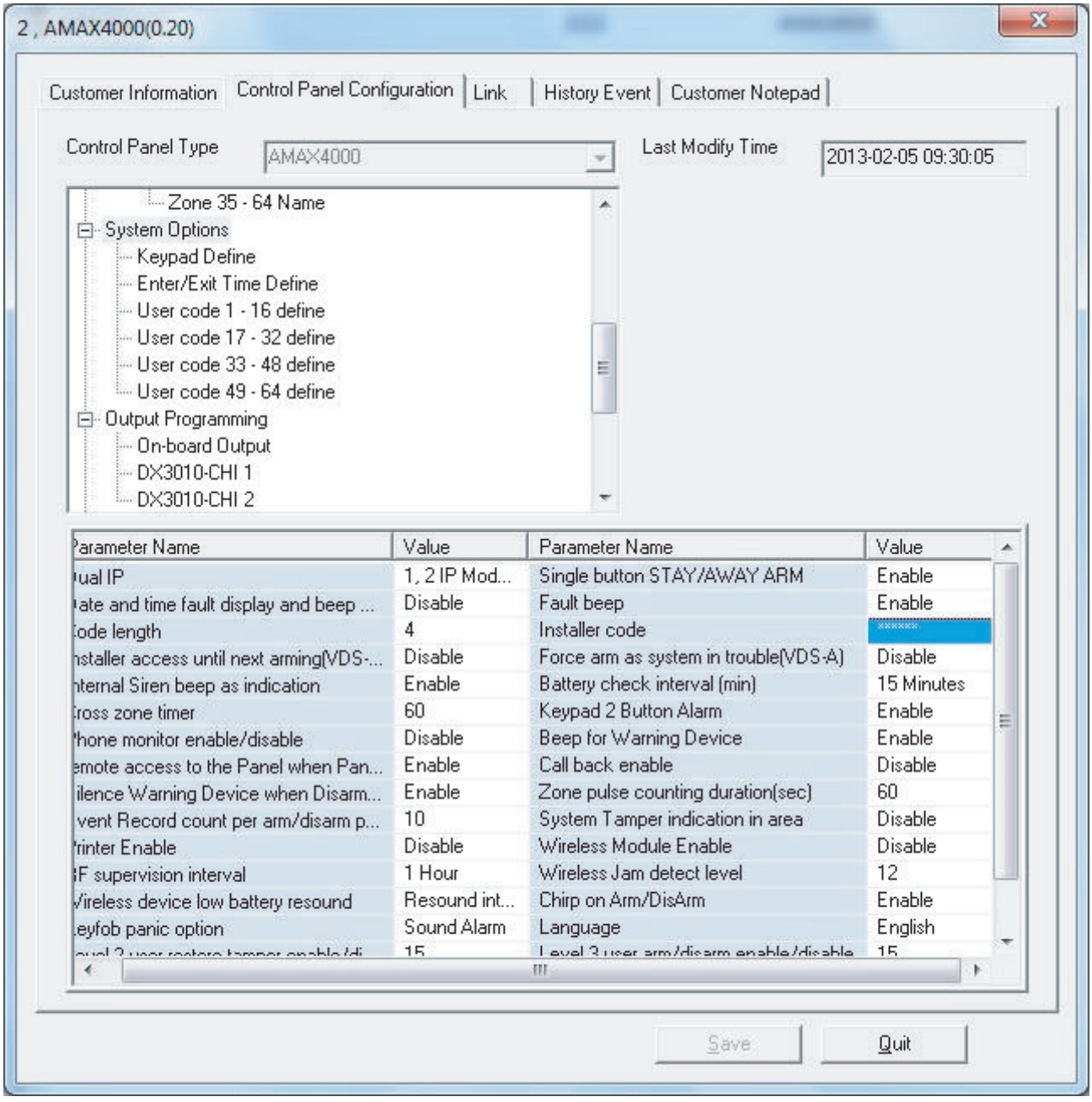


Figure 8.12: Control panel configuration - System options

8.6.1 Direct Connection

The direct connection function allows establishing a connection from the remote PC to AMAX panel 4000 via USB to perform remote programming and control.
The remote PC should have installed remote programming software like A-Link Plus. Customer should install "USB driver" first. This installation will create an additional COM device on the PC. When finished installation, identify the COM-Port associated to this device.

Start A-Link Plus application and login with customer: admin pw: ADMIN. Select Menu item File – Communication Settings.

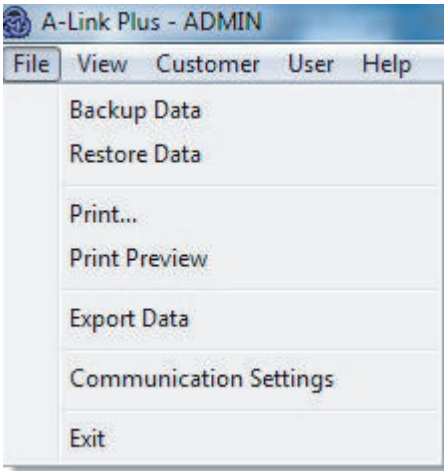


Figure 8.13: A-Link Plus

Modify the parameter “Direct Link Port”: Select identified COM Port.

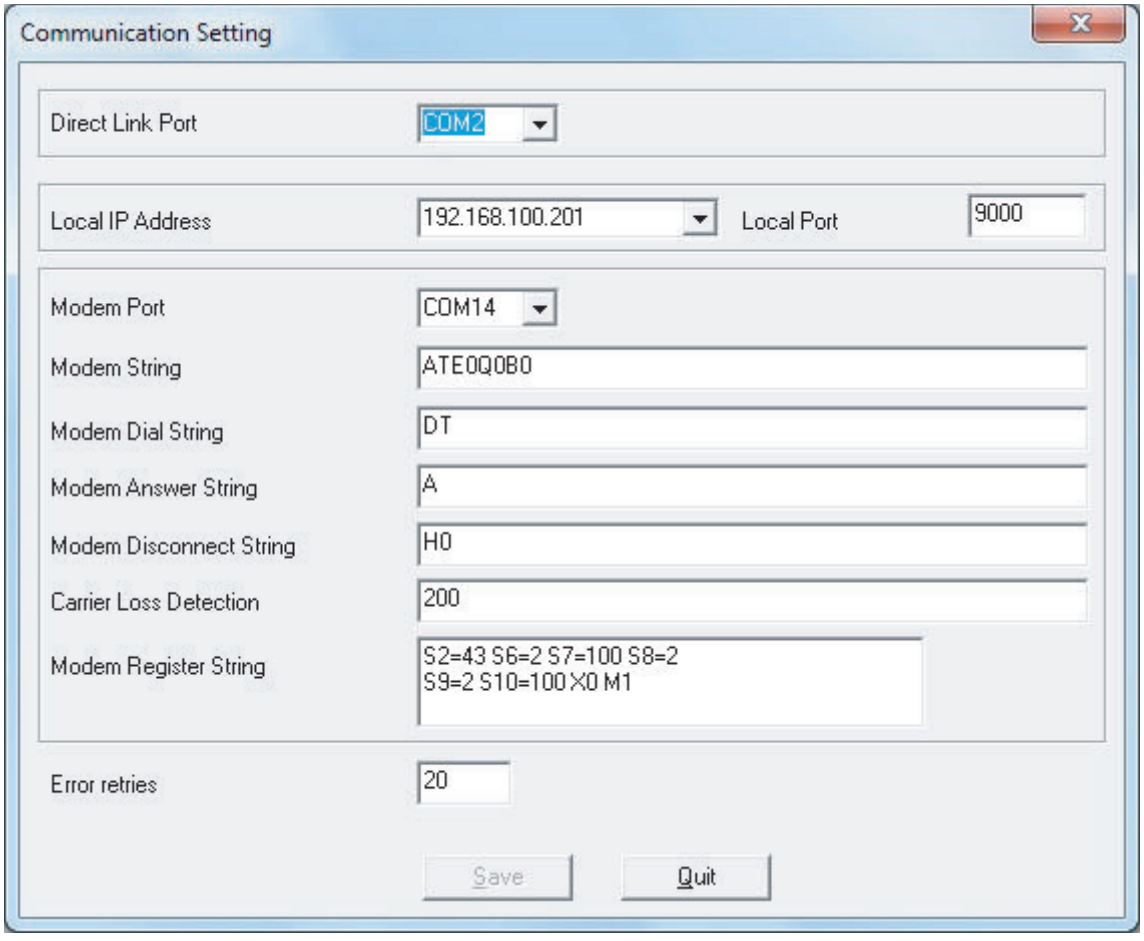


Figure 8.14: Direct link port

Open customer account AMAX panel 4000. Select index sheet “Link”. Select communication model “Direct Connect”.
Click on Button “Connect” in order to connect to AMAX panel 4000.

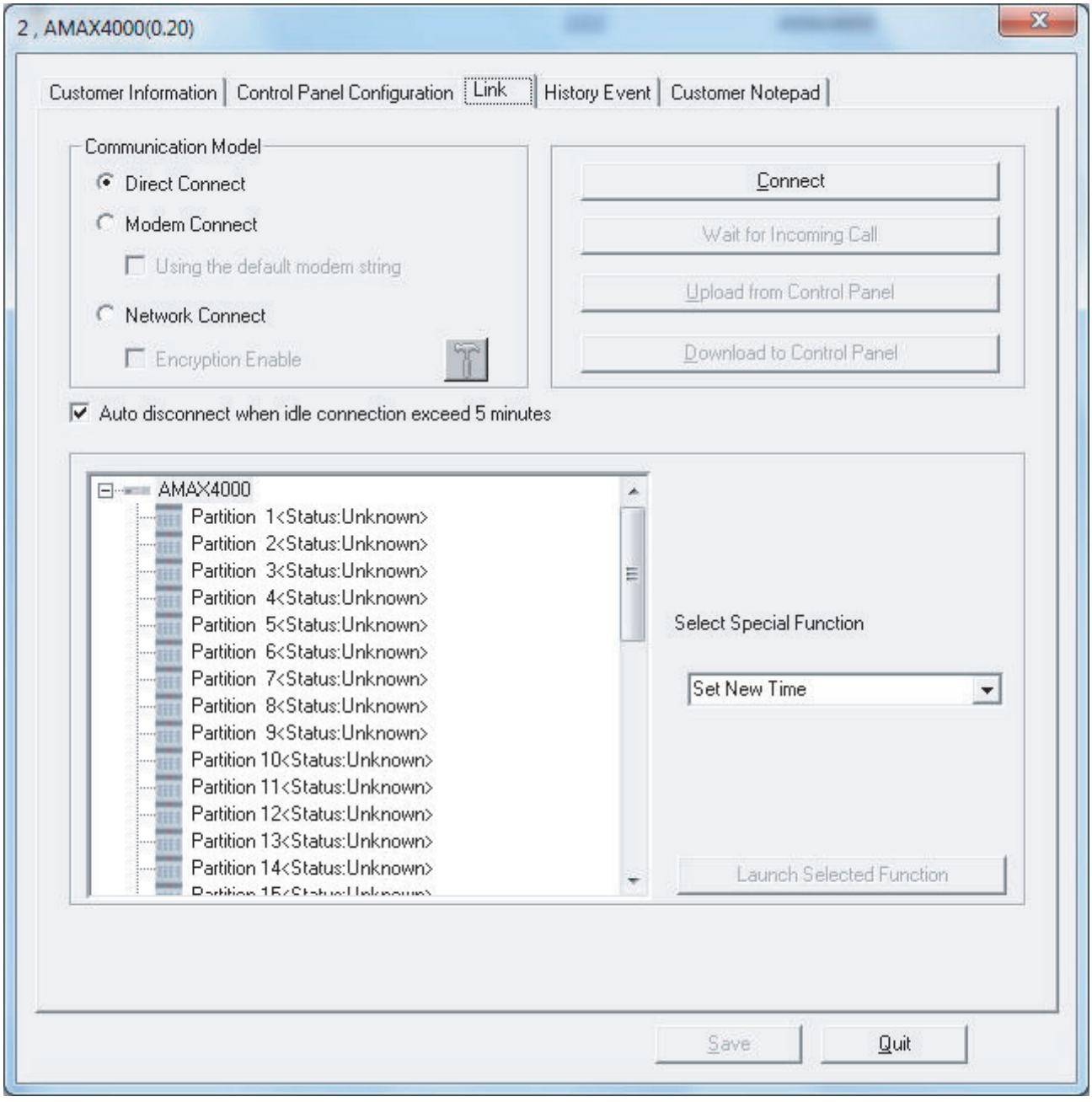


Figure 8.15: Link-Direct Connect

When connected to AMAX panel 4000, Button label changes to “Disconnect”.

8.6.2 Modem Connection

Telephone Remote Connection

The telephone remote connection function allows establishing a connection from the remote PC to the alarm control panel through telephone network to perform remote programming and control.

The telephone remote connection is divided into automatic connection and manual connection with callback confirmation. The process of automatic connection is slower.

1. Number of rings (address 0144), callback telephone number (address 0146 - 0161) and telephone remote connection enabled (address 0145) are set on the alarm control panel.
2. Run RPS on the remote PC and set relevant parameters in relevant operating interfaces.

– a. Go to “File” and click “Communication Settings” to set parameters related to modem in the communication Settings tab page, then click “Save”.

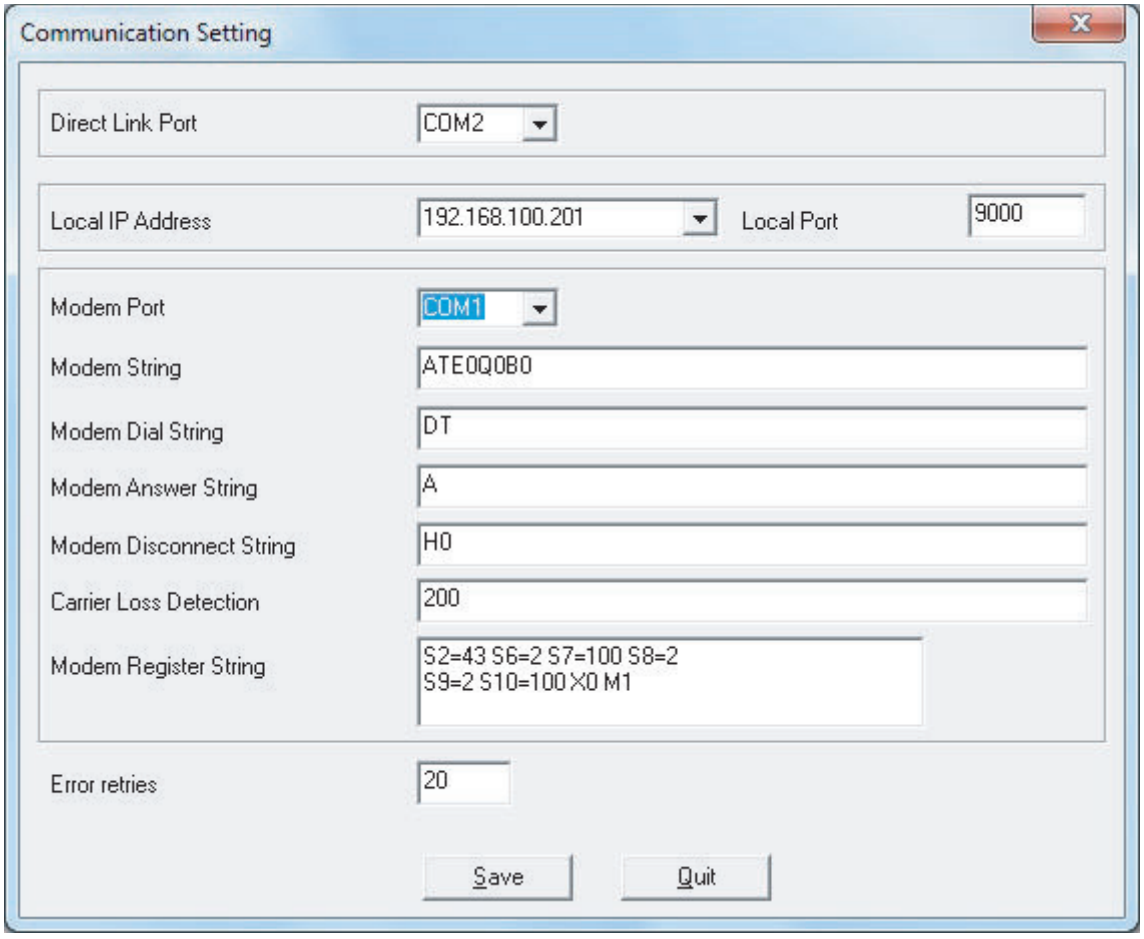


Figure 8.16: Communication Settings

Notice!

Modem string settings in figure x.1 are only used, when the default modem string is not used. If the default modem string should be used, activate parameter “Using the default modem string” in register “Link” of Customer Information (see figure x.2). In this case the values in figure x.1 are ignored.

Instead the following string is used: AT&CI&D2X0&Q0S7=255S9=0+MS=B103B17

– b. Click “New Customer” in “Customer” to create customer. Enter relevant customer information in the “Customer Information” tab page. The “Customer Number” must be entered. Enter the telephone number connected to the alarm control panel in “Alarm Control Panel Telephone Number”. The alarm control panel telephone number does not need to be set for manual connection.

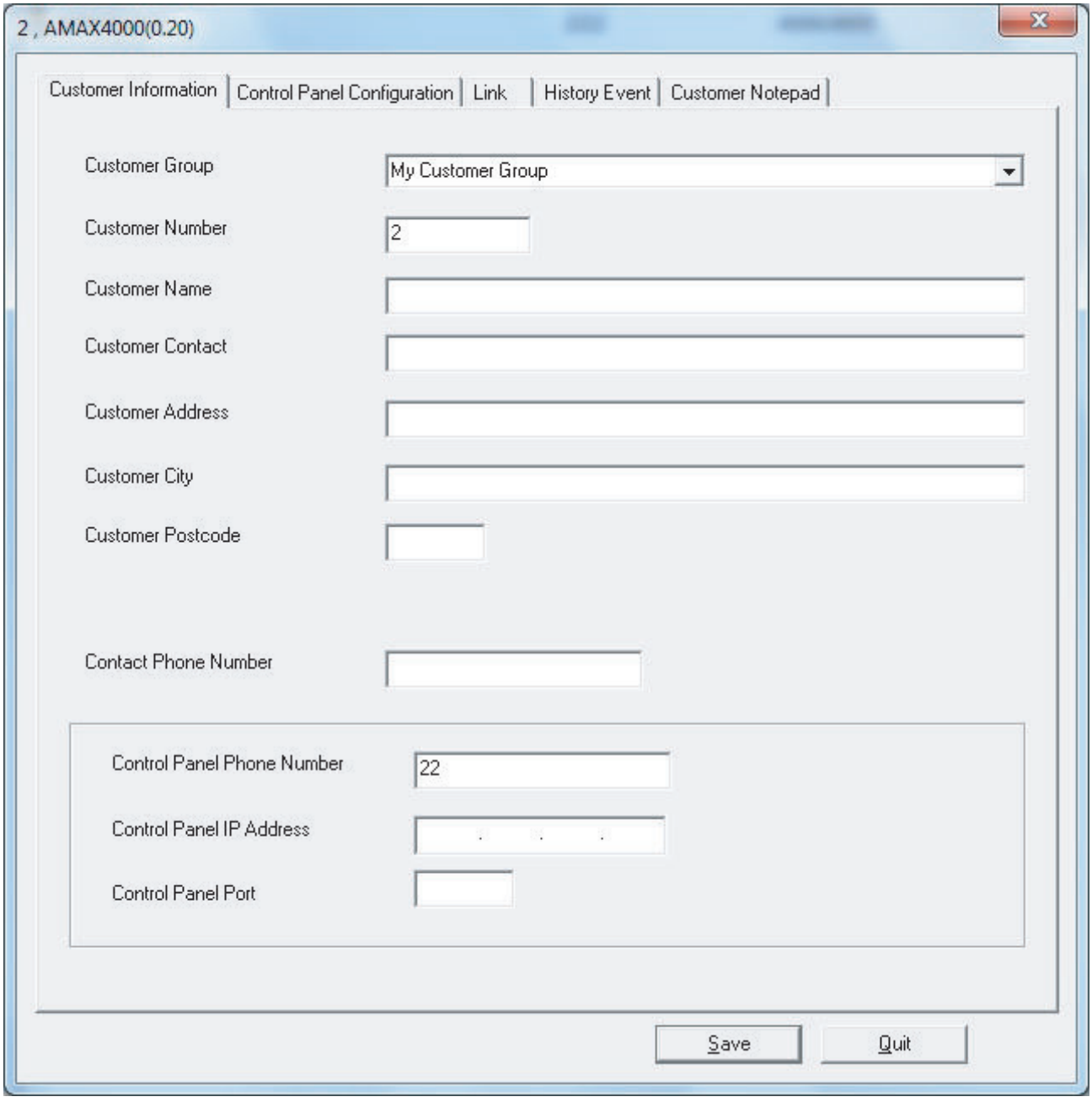


Figure 8.17: Customer Information

– c. Select the latest version for the alarm control panel type of AMAX4000- in the alarm control panel setting tab page.

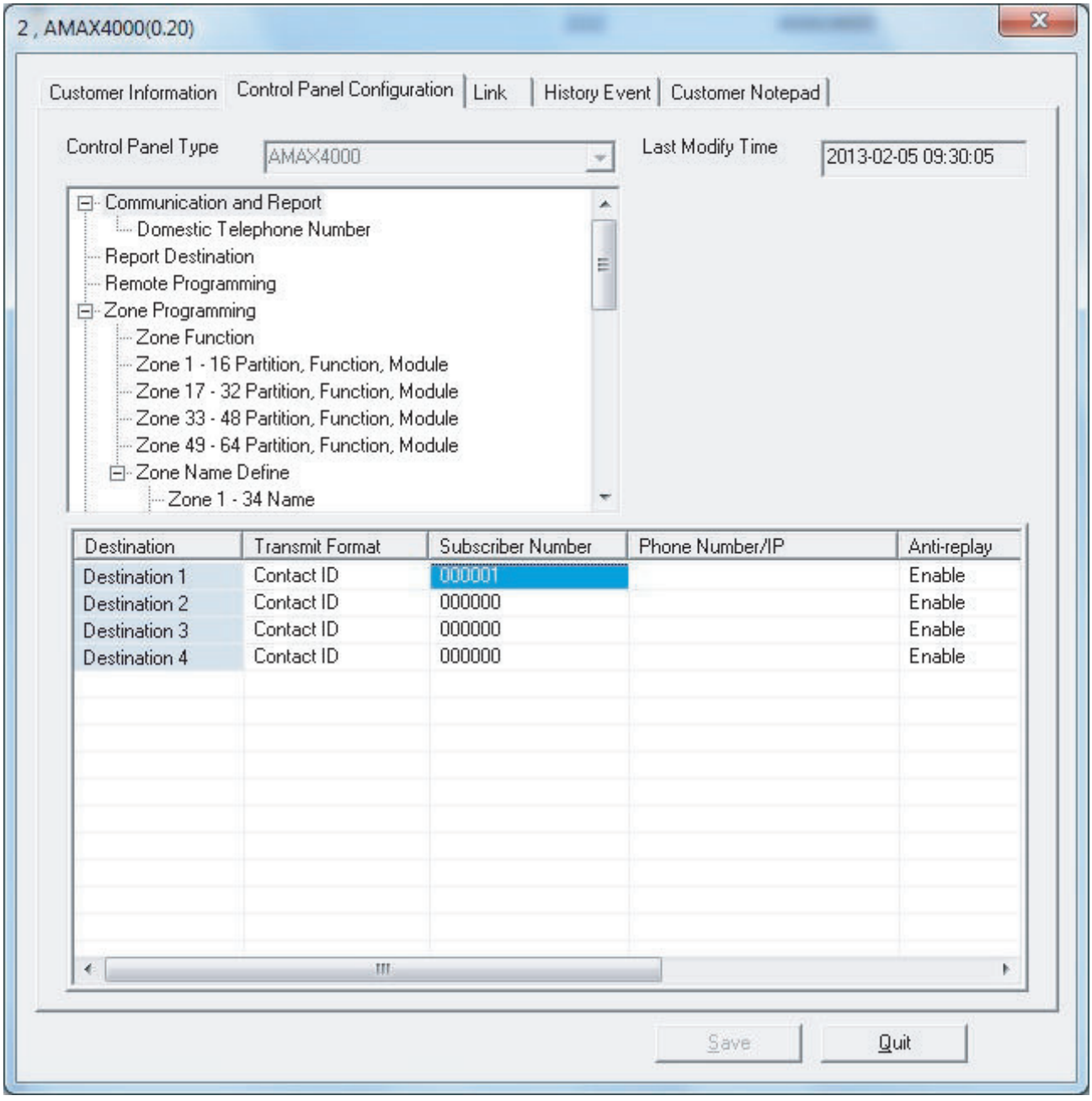


Figure 8.18: Control Panel Configuration

- d. Select “Communication and Report” in the “Control Panel Configuration” tab page. Set the SUBSCRIBER NUMBER of receiver 1. The SUBSCRIBER NUMBER must be in consistence with the SUBSCRIBER NUMBER of receiver 1 of the alarm control panel.
- e. Select “System Options” in the “Control Panel Configuration” tab page. Set installer code. The “Installer Code” and its digits must be in consistence with the installer code and its digits of the current alarm control panel.
- f. Click “Save”.

1. Connect

- Automatic dialing connection: Select “Modem Connection” in the “Connection” tab page and click “Connect”.

– Or manual dialing connection: Select “Modem Connection” in the “Connection” tab page and click “Waiting for Callback”, then initiate callback call from the alarm control panel with keypad: Enter SUBSCRIBER NUMBER, press [5] [7] and then [#].

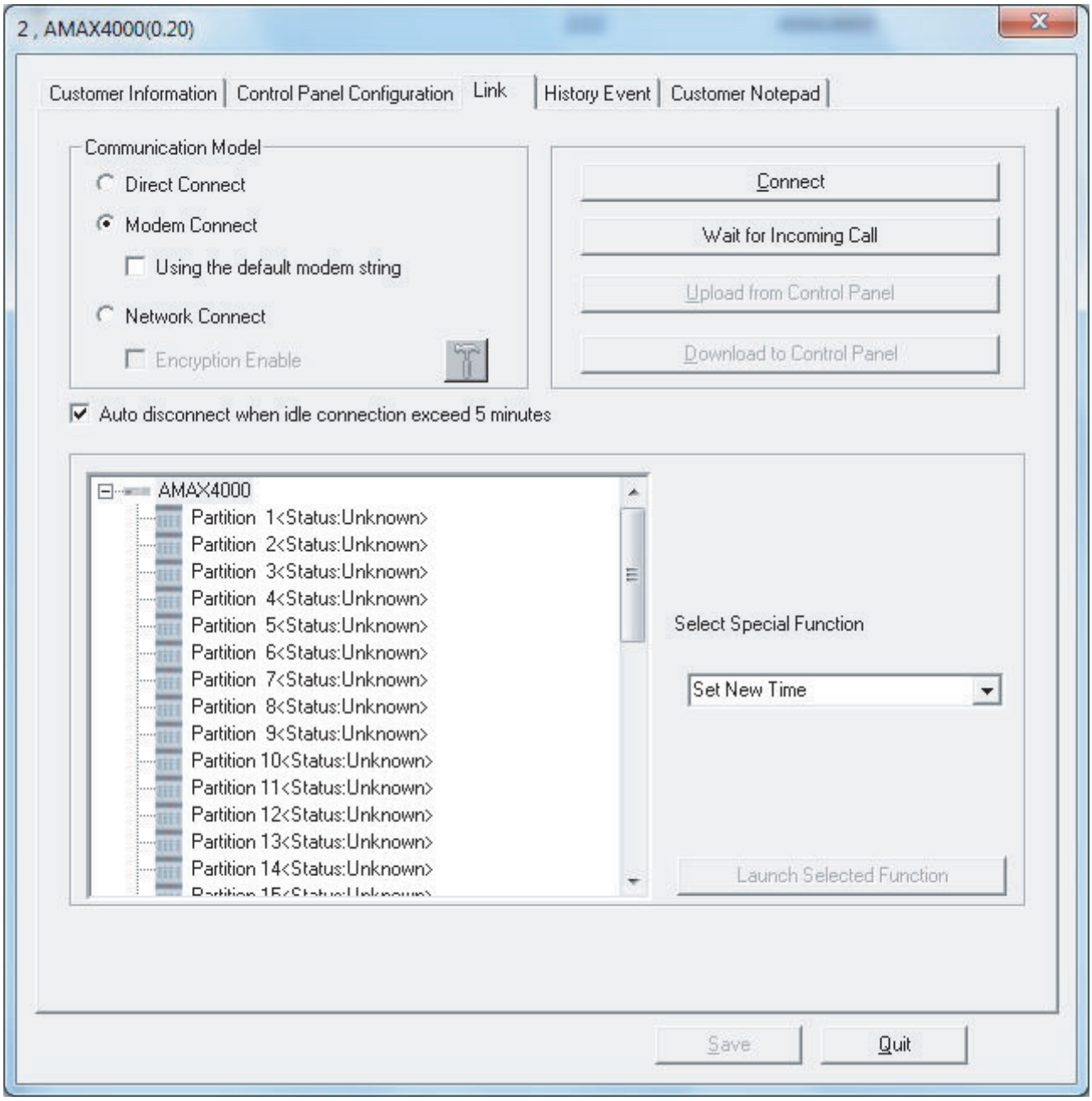


Figure 8.19: Modem Connect

Notice!

Modem string settings in figure x.1 are only used, when the default modem string is not used. If the default modem string should be used, activate parameter “Using the default modem string” in register “Link” of Customer Information (see figure x.2). In this case the values in figure x.1 are ignored.

Instead the following string is used: AT&CI&D2X0&Q0S7=255S9=0+MS=B103B17

After successfully connected, RPS can execute multiple operations, including reading/writing control panel parameters, remote arming/disarming, viewing log, etc. After the telephone is successfully connected, RPS will disconnect it with the alarm control panel after 5 minutes of idling.

8.6.3 IP Connection

IP Remote Connection

The IP remote connection function allows to establish a connection from the remote PC to the alarm control panel through LAN or WAN to perform remote programming and control. The remote monitoring center should be installed remote programming software like A-Link Plus and perform related IP address programming in order to apply this function in LAN (support DHCP) and WAN.

The IP remote connection is divided into automatic connection and manual connection with callback confirmation.

For more information about IP programming, see *IP Address, page 44*

1. Set receiver 1 SUBSCRIBER NUMBER (addresses 0017 - 0022), network remote settings programming option (addresses 0162 - 0179), i.e., enter IP address and port number of RPS, DHCP update time on the alarm control panel.
2. Run RPS on the remote PC and set relevant parameters in relevant operating interfaces

– a. Go to “File” and click “Communication Settings” to select “local IP address” in the “Communication Settings” tab page. If there are multiple IP addressed in the pull-down menu, be sure to select the latest local IP address and enter the local port, i.e., the RPC port number of programming option 0174 – 0178, then click “Save”.

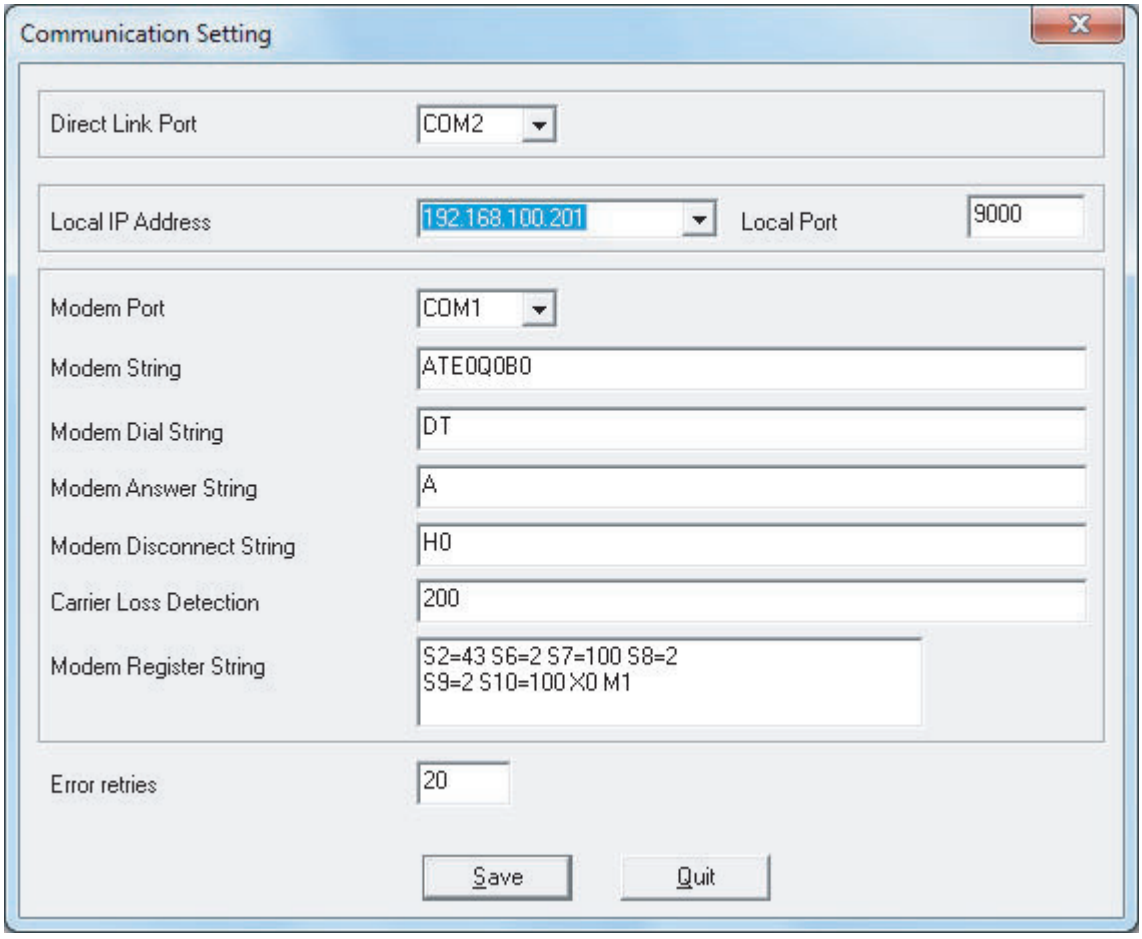


Figure 8.20: Communication Setting

– b. Click “New Customer” in “Customer” to create customer. Enter relevant customer information in the “Customer Information” tab page. The “Customer Number” must be entered. The IP address and port number of the alarm control panel are the IP address and port number of the communication module 1 installed in the alarm control panel, and will be used when the alarm control panel uses fixed IP and port number. If the fixed IP address and port number are not known, after the UDP data packet transmitted by the alarm control panel is received and the SUBSCRIBER NUMBER of receiver 1 has been set in the “Control Panel Configuration” tab page, please directly click the connection in the “connection” tab page. The prompt information will recommend the SUBSCRIBER NUMBER the alarm control panel received the last time and its IP address and port number.

Under DHCP environment, it is not necessary to set “Alarm Control Panel IP Address” and “Alarm Control Panel Port Number”.

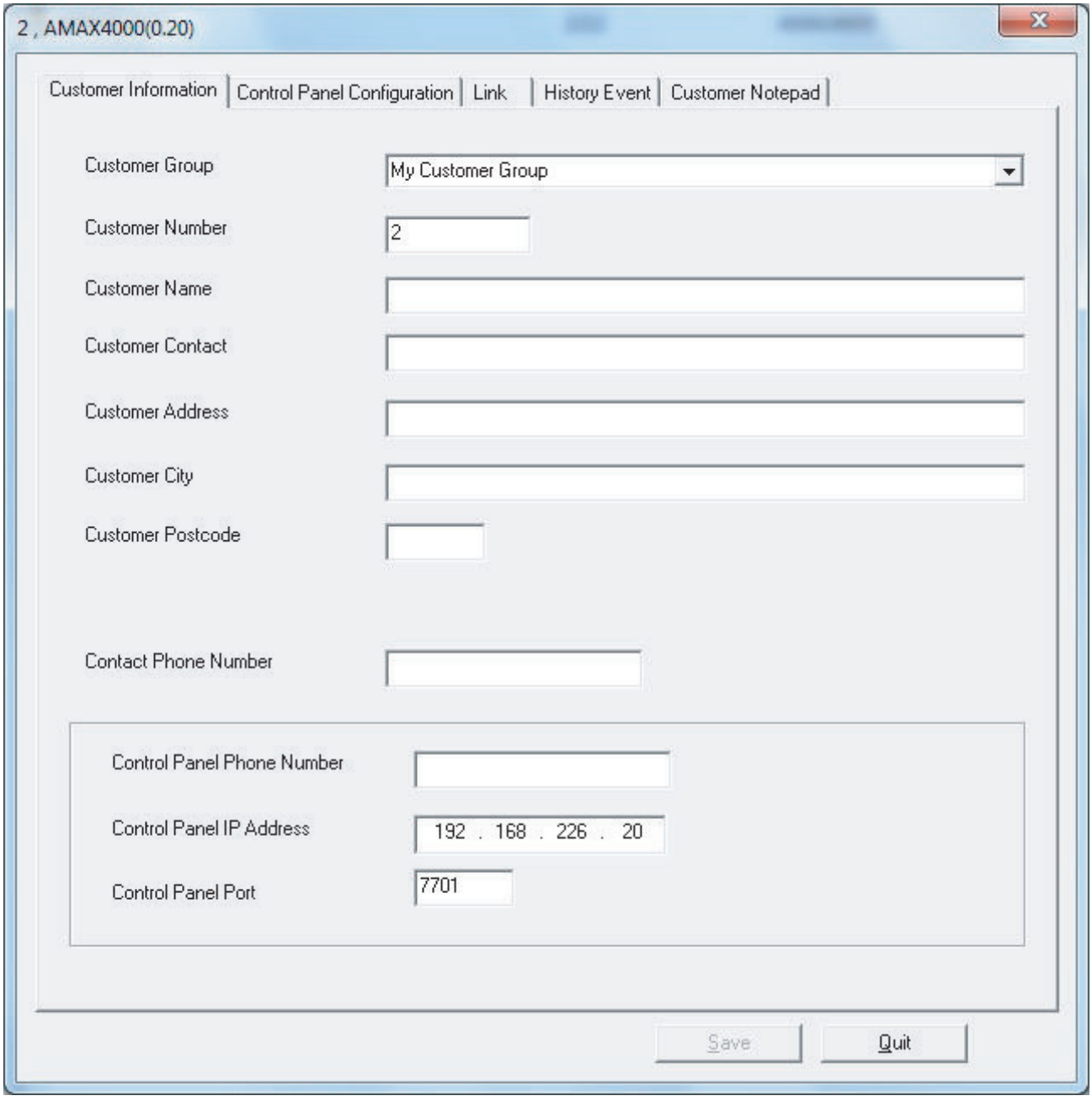


Figure 8.21: Customer Information

– c. Select the latest version for the alarm control panel type of AMAX4000 in the alarm control panel setting tab page.

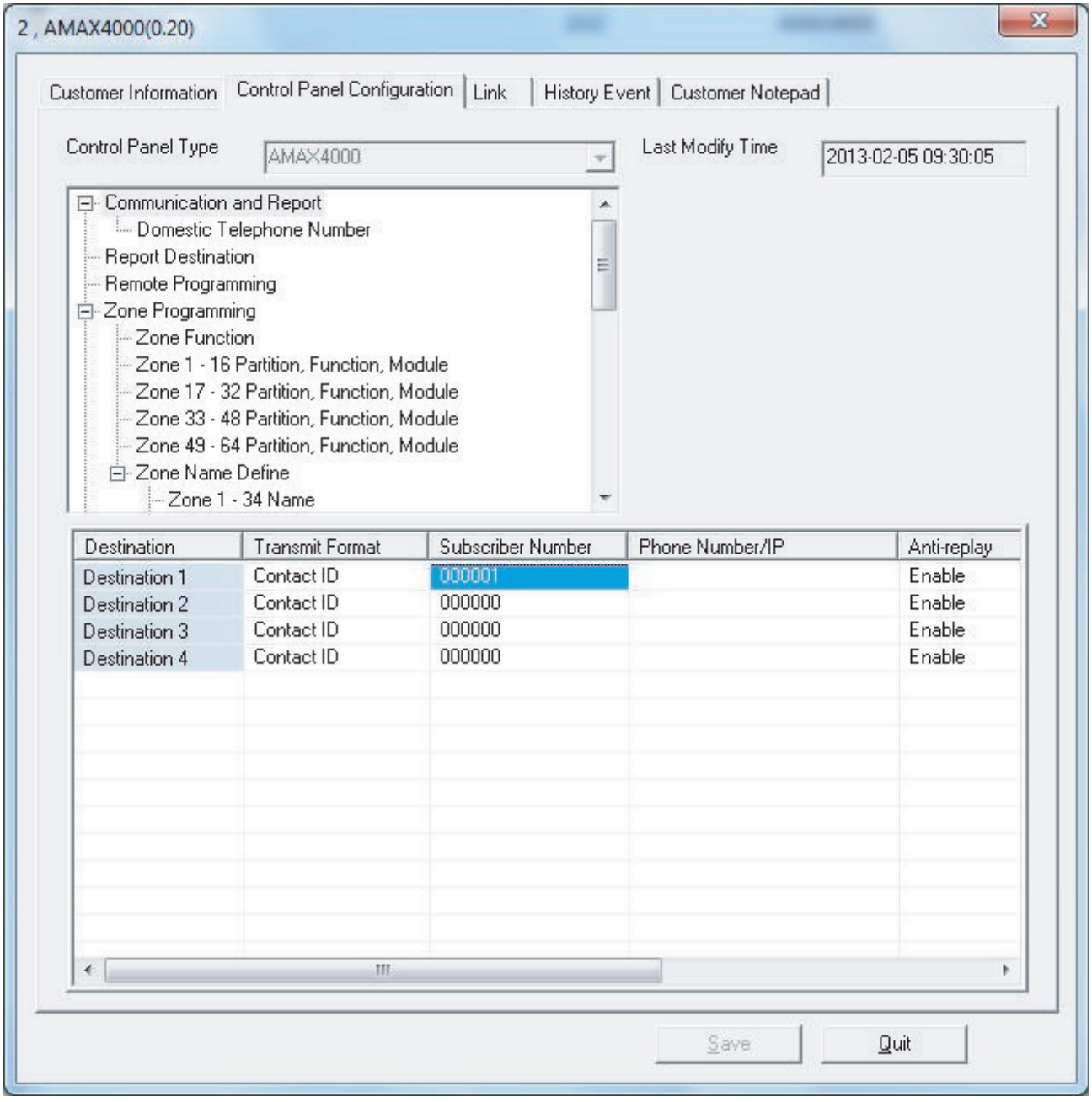


Figure 8.22: Control Panel Type

- d. Select “Communication and Report” in the “Control Panel Configuration” tab page. Set the SUBSCRIBER NUMBER of receiver 1. The SUBSCRIBER NUMBER must be in consistence with the SUBSCRIBER NUMBER of receiver 1 of the alarm control panel.
- e. Select “System Options” in the “Control Panel Configuration” tab page. Set installer code. The “Installer Code” and its digits must be in consistence with the installer code and its digits of the current alarm control panel.
- f. Click “Save”.

1. Connect

- Automatic IP connection: Select “Network Connection” and click “Connect” in the “Connection” tab page.

– Or manual IP connection: Select “Network Connection” and click “Waiting for Callback” in the “Connection” tab page. Then initiate IP connection from the alarm control panel with keypad: Enter SUBSCRIBER NUMBER, press [5] [7] and then [#].

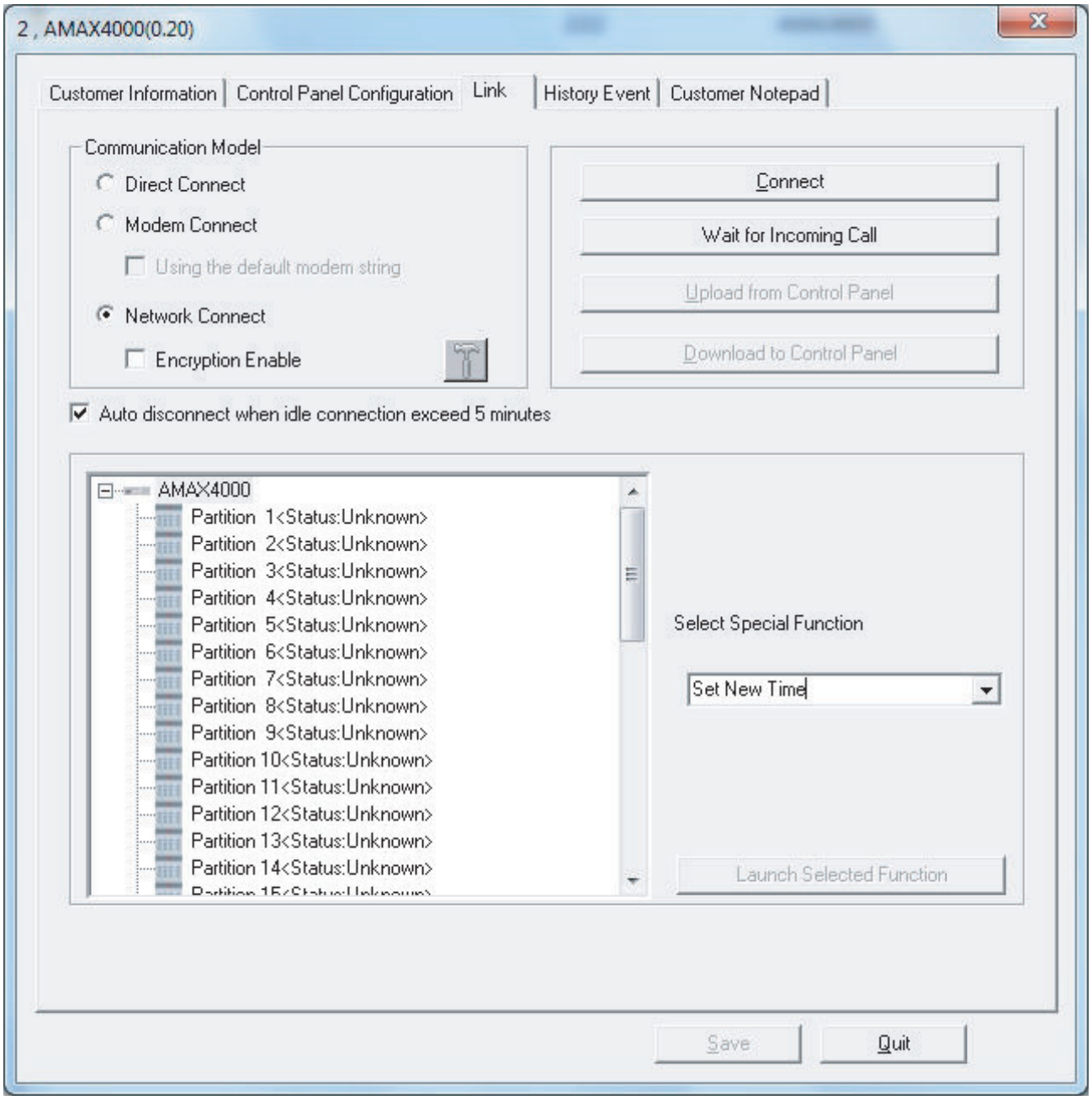


Figure 8.23: Network Connect

After successfully connected, RPS can execute multiple operations, including reading/writing control panel parameters, remote arming/disarming, viewing log, etc.
After IP successfully connected, RPS will disconnect it with the alarm control panel after 5 minutes of idling if you select “Auto disconnect when idle connection exceeds 5 minutes” option.

8.7 Programming with the ICP-EZPK Programming Key

The ICP-EZPK Programming Key allows you to save or copy programming information from your control panel. After saving information in the programming key, you can easily program other AMAX panel 4000 / AMAX panel 4000 EN with the same programming data. You can also use the programming key to back up existing information.
If you have a new programming key, enter installer's programming mode, program the system as required, and connect the programming key to the control panel.
To connect the programming key:
Locate the socket labelled PROGRAMMING KEY at the top of the printed circuit board (PCB). Observe the triangular markings on the PCB and align them with the markings on the programming key.

For example: to copy data from the control panel to the programming key:

1. Enter the installer code (the default is 1234) + (958) and press [#] to enter into installer's programming mode.
2. Enter [9 6 2 #]. Refer to Section 6.23 Command 962 – Copy the control panel memory to the programming key, page 46.
3. Enter [9 6 0 #] to exit from installer's programming mode.
4. The system resets and returns to the disarmed state. And the programming key becomes your standard data pattern for future control panel programming.

Caution!
If you do not enter installer's programming mode first, which connects the blank ICP-EZPK Programming Key (blue) to the control panel, no data can be uploaded /downloaded.
An unknown error may be caused if the installer's programming mode is not exited before removing the programming key.

Programming Key
With the programming key, the programming parameters of the current alarm control panel to other systems with the same applications.

Copying Parameters of the Alarm Control Panel to Key
Copy the programming data in the memory of the alarm control panel into the programming key with the keypad.

1. Connect the programming key to the plug marked as "PROGRAMMING KEY" on the top of the printed circuit board (PCB) of the alarm control panel. Please note that the direction of the programming key should be consistent with the direction marked on the PCB.
2. Select text keypad installation menu [ADDRESS/KEY PROGR – COPY DATA TO KEY] and Press [#]. After successfully copying the programming data of the alarm control panel to the programming key, the confirmation tone will be sounded. Wrong prompt tone and display of [Failure of Control Panel Parameters to Key] indicate damage of programming key data. The data need to be copied into the programming key again.
3. Unplug the programming key from the alarm control panel.
4. LED/Icon LCD keypad can also be used to copy alarm control panel parameters to key parameters. See Command 962.

Copying Key Parameters to the Alarm Control Panel
Copy the programming data of the programming key into the alarm center.

1. Connect the programming key to the plug marked as "PROGRAMMING KEY" on the top of the printed circuit board (PCB) of the alarm control panel. Please note that the direction of the programming key should be consistent with the direction marked on the PCB.
2. Select text keypad installation menu [ADDRESS/KEY PROGR – COPY DATA TO PANEL] and Press [#]. After successfully copying the programming data in programming key to the alarm control panel, the confirmation tone will be sounded. Wrong prompt tone and display of [Failure of Key Parameters to Control Panel] indicate damage of programming key data. The data need to be copied into the alarm control panel again.
3. Unplug the programming key from the alarm control panel.

LED/Icon LCD keypad can also be used to copy key parameters to the alarm control panel. For more information refer to Command 963 .

8.8 Firmware Upgrade with the ICP-EZRU2 Upgrade Key

Use Firmware Upgrade Key (green) to upgrade Firmware of alarm control panel.
Procedure:

– Power OFF alarm control panel. Also remove battery. Unplug USB cable, if plugged.
– Locate the socket labeled PROGRAMMING KEY at the top of the printed circuit board (PCB). Observe the triangular markings on the PCB and align them with the markings on the upgrade key.
– Power ON alarm control panel. Observe LED of upgrade key lights steady during upgrade is sent to alarm control panel. This takes about one minute. When upgrade is terminated, LED is blinking.
– Remove upgrade key

9 Programming

The control panel programming options are stored in a non-volatile flash memory. This memory has all relevant configuration and user-specific data even after a total power loss. Because the data retention time is quite long without power, reprogramming is not required after powering up the control panel.
Programming with keypad is possible only when all of zones in the system are in disarmed status and no alarm is activated. Installer Code is required for programming.

Notice!
It is not recommended to use other keypads or methods simultaneously to program the system while programming with the current keypad.

9.1 Communication and Reports Setting

Report Options	Address	Default	
Telephone Number / IP Address and Port for Receiver 1	0000 - 0016	15	
Subscriber ID Number	0017 - 0022	000000	
Transmission Format for Receiver (0 = Not used, 1 = Contact ID, 2= SIA, 3 = Conettix IP)	0023	1	
Anti-replay for Receiver (0 = Disabled, 1 = Enabled)	0024	1 EN=1	
Acknowledge Wait Time for Receiver (05 - 99 seconds)	0025 - 0026	05	
Network Polling Time for Receiver (001 - 999 minutes)	0027 - 0029	001	
Telephone Number / IP Address and Port for Receiver 2	0030 - 0046	15	
Subscriber ID Number	0047 - 0052	000000	
Transmission Format for Receiver (0 = Not used, 1 = Contact ID, 2= SIA, 3 = Conettix IP)	0053	1	
Anti-replay for Receiver (0 = Disabled, 1 = Enabled)	0054	1 EN=1	
Acknowledge Wait Time for Receiver (05 - 99 seconds)	0055 - 0056	05	
Network Polling Time for Receive (001 - 999 minutes)	0057 - 0059	001	
Telephone Number / IP Address and Port for Receiver 3	0060 - 0076	15	
Subscriber ID Number	0077 - 0082	000000	
Transmission Format for Receiver (0 = Not used, 1 = Contact ID, 2= SIA, 3 = Conettix IP)	0083	1	
Anti-replay for Receiver (0 = Disabled, 1 = Enabled)	0084	1 EN=1	
Acknowledge Wait Time for Receiver (05 - 99 seconds)	0085 - 086	05	
Network Polling Time for Receiver (001 - 999 minutes)	0087 - 089	001	
Telephone Number / IP Address and Port for Receiver 4	0090 - 0106	15	
Subscriber ID Number	0107 - 0112	000000	

Transmission Format for Receiver (0 = Not used, 1 = Contact ID, 2= SIA, 3 = Conettix IP)	0113	1	
Anti-replay for Receiver (0 = Disabled, 1 = Enabled)	0114	1 EN=1	
Acknowledge Wait Time for Receiver (05 - 99 seconds)	0115 - 0116	05	
Network Polling Time for Receiver (001 - 999 minutes)	0117 - 0119	001	

Notice!
Enter telephone number when the Contact ID or SIA is selected; enter IP address and port number when the Conettix IP is selected. Anti-replay for Receiver, Acknowledge Wait Time for Receiver and Network Polling Time for Receiver are valid only when using Conettix IP.
Consequences

Setting Telephone Number
For telephone number programming, See Telephone Programming Parameters
Setting IP Address and Port Number
The IP address is programmed with the 17 digits: Digits 1 - 12 for the IP address of the receiver; 13 - 17 for the port.
It is not necessary to enter dots in programming, but 0 must be entered ahead of the digit to make up 3 digits when each IP address unit is fewer than 3 digits. 0 must be entered ahead of the digit to make up 5 digits when the port is fewer than 5 digits.
Example:
Receiver IP address 128.73.168.7, port 7700, should be made as: 128 073 168 007 07700

Dual IP Settings

Option	Address	Default	
0 = 1 IP module, 1 = 2 IP modules	0120	1	

Notice!
Dual IP Settings are valid only when used in the Conettix IP format. This programming option is valid for B426 and ITS-DX4020-G modules. ITS-DX4020-G cannot be set as No. 2 IP module.

Module	Address
ITS-DX4020-G module or B426- module 1	134
B426 module 2	250

System Reporting

Option	Address	Default	
Zone Status Restore Report	0121	6	
AWAY Arming / Disarming Report	0122	6 EN=1/5/6/7	
STAY Arming / Disarming Report	0123	6 EN=1/5/6/7	

System Status Report (Zone fail, comm. fail, telephone line fail, AC fail, low batterie...etc.)	0124	6 EN=1/5/6/7	
Keypad Panic Alarm Report	0125	0	
Keypad Fire Alarm Report	0126	0	
Keypad Medical Alarm Report	0127	0	
Automatic Test Report	0128	6 EN=1/5/6/7	
0 = No report, 1 = Receiver 1, 2 = Receiver 2, 3 = Receiver 3, 4 = Receiver 4, 5 = Receiver 1,2,3 and 4, 6 = Receiver 1 (2,3 and 4 for backup), 7 = Receiver 1 (2 for backup) and receiver 3 (4 for backup)			

Notice!
When the Transmission Format for Receiver in the receiver programming is set to 0 (not used), i.e., setting the report option as sending report to a receiver, then the alarm control panel will actually not send any report.

Automatic Test Report

Address 0129 - 0134	**Address**	**Default**	
Test Report Time: Interval 00 = Do not use timing report , 01 - 99 = 1 - 99 hours	0129 - 0130	24 VDS-A EN=1-24	
Report Time: Hour 00 - 23 = 0 - 23 hours, Others = Do not use real-time report	0131 - 0132	99	
Report Time: Minute 00 - 59 = 0 - 59 minutes, Others = Do not use real-time report	0133 - 0134	99	

Report Expiry Time

Address 0135 - 0137	**Address**	**Default**	
000 = No time limit, 001 - 255 = 1 - 255 minutes	0135 - 0137	000 VDS-A EN=000	

Installer Access Until Next Arming

Address 0138	**Address**	**Default**	
0 = disabled, 1 = enabled	0138	0 VDS-A=1	

Force Arm When System Is In Trouble Condition

Address 0139	**Address**	**Default**	
0 = disabled, 1 = enabled	139	1 VDS-A EN=0	

Siren / PO 1+2 Supervision

Address 0140	**Address**	**Default**	
0 = disabled, 1 = PO1 enabled, 2 = PO2 enabled, 3 = PO1+2 enabled	0140	0 VDS-A EN=3	

Keypad 2 Button Alarm

Address 0141	**Address**	**Default**	
0 = disabled, 1 = enabled	0141	0	

Phone Line Monitor

Address 0142	**Address**	**Default**	
0 = disabled, 1 = enabled	0142	0 VDS-A EN=1	

Beep For Warning Devices

Address 0143	**Address**	**Default**	
0 = disabled, 1 = enabled	0143	1	

Ring Count

Address 0144	**Address**	**Default**	
1 - 13 = Number of rings until the control panel responds 14 = Call the control panel and allow the phone to ring no more than twice and hang up. Wait a minimum of 8 sec and call the control panel again. The control panel answers on the first ring. 15 = Call the control panel and allow the phone to ring no more than four times and then hang up. If you call again within 45 sec, the control panel answers the call on the first ring. 0 = Panel does not answer	0144	14	

Remote Programming

Address 0145	**Address**	**Default**	
0 = disabled, 1 = enabled	0145	1 VDS-A=0	

Callback Telephone Number

Address 0146 - 0161	**Address**	**Default**	
See Telephone Programming Parameters	0146 - 0161	15	

Remote PC Setting

Address 0162 - 0179	Address	Default	
RPC IP No	0162 - 0173	15	
RPC Port Number	0174 - 0178	15	
Control Panel DHCP Update Time (hours)	0179	15	

RPC is the remote programming computer equipped with remote programming software.

Remote Access To Panel When Panel Is Armed

Address 0180	Address	Default	
0 = Disable, 1 = Enable ; Default 1	0180	1	

Keypad Language

Address 0181	Address	Default	
0 = Default, 1 = EN, 2 = DE, 3 = ES, 4 = FR, 5 = IT, 6 = PL, 7 = NL, 8 = SE	0181	0	

Tamper Reset For User

Address 0182	Address	Default	
0 = Disable, 1 = Enable	0182	1	

Arm / Disarm For Installer

Address 0183	Address	Default	
0 = Disable, 1 = Enable	0183	0	

Zone Tamper Bypass when DEOL Zone is Bypassed

Address 0184	Address	Default	
0 = Disable, 1 = Enable	0184	1 0=Incert	

– This function is only accessible in address programming

Call Back Setting

Address 0196	Address	Default	
0 = Disable, 1 = Enable	0196	0	

Silence Warning Device When Disarmed

Address 0197	Address	Default	
0 = Disable, 1 = Enable	0197	1	

Zone Pulse Count Duration

Address 0198 - 0200	Address	Default	
0 = Disable, 1-999sec = Duration	0198	060 VDS-A EN=000	

Event Record Count per Set/Unset Period

Address 0201	Address	Default	
3 - 10	0201	10 EN=10	

System Tamper Indication In Area

Address 0202	Address	Default	
0 = Area 1, 1 = All Areas	0202	0	

Internal Siren Beep As Indication

Address 0203	Address	Default	
0=Disable, 1=enabled	0203	0	

Battery Check Interval

Address 0204	Address	Default	
0 = Disabled , 1-15 minutes	0204	15VDS-A EN=15	

Cross Zone Timer

Address 0205 - 0207	Address	Default	
001 - 999 sec	0205 - 0207	060	

AC Power Supply Fault Report Delay

Address 0208 - 0209	Address	Default	
99 = Disabled, 00 - 98 minutes	0208 - 0209	60 VDS-A EN=00-60	

Domestic Telephone Number

Address 1618 - 1682	Address	Default	
Domestic Telephone Number 1	1618 - 1633	15	
Domestic Telephone Number 2	1634 - 1649	15	
Domestic Telephone Number 3	1650 - 1665	15	

Domestic Telephone Number 4	1666 - 1681	15	
See Telephone Programming Parameters			

If the default 15 is set to the initial digit of the telephone number, domestic telephone alarm function is disabled; If set to other positions, it marks the end of the telephone number.

Telephone Programming Parameters

Telephone Number Required	Programming Input Key	Telephone Number Required	Programming Input Key
0	0	7	7
1	1	8	8
2	2	9	9
3	3	*	11
4	4	#	12
5	5	4 seconds pause	13
6	6	15	15

Table 9.1: Telephone Programming Parameters

9.2 Zone Programming

Zone Functions

The system supports up to 64 zones. Each zone can select one of 16 zone functions as well as Areas and modules.

Address 0210 - 0361			
Zone Function # 00	**Address**	**Default**	
Zone Type	0210 - 0211	0 0	
Force Arm / Zone Bypass	0212	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0213	0 VDS-A EN=0/2	
Zone Pulse Count	0214	0 VDS-A EN=0	
Zone Lockout	0215	3	
Zone Tamper (DEOL)	0216	1	
Zone Status Report	0217	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0218	0 VDS-A EN=0	
Domestic No.	0219	0	
Zone Function # 01	**Address**	**Default**	
Zone Type	0220 - 0221	0 1	
Force Arm / Zone Bypass	0222	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0223	0 VDS-A EN=0/2	

Zone Pulse Count	0224	0 VDS-A EN=0	
Zone Lockout	0225	3	
Zone Tamper (DEOL)	0226	1	
Zone Status Report	0227	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0228	0 VDS-A EN=0	
Domestic No.	0229	0	
Zone Function # 02	**Address**	**Default**	
Zone Type	0230 - 0231	0 2	
Force Arm / Zone Bypass	0232	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0233	0 VDS-A EN=0/2	
Zone Pulse Count	0234	0 VDS-A EN=0	
Zone Lockout	0235	3	
Zone Tamper (DEOL)	0236	1	
Zone Status Report	0237	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0238	0 VDS-A EN=0	
Domestic No.	0239	0	
Zone Function # 03	**Address**	**Default**	
Zone Type	0240 - 0241	0 3	
Force Arm / Zone Bypass	0242	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0243	0 VDS-A EN=0/2	
Zone Pulse Count	0244	0 VDS-A EN=0	
Zone Lockout	0245	3	
Zone Tamper (DEOL)	0246	1	
Zone Status Report	0247	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0248	0 VDS-A EN=0	
Domestic No.	0249	0	
Zone Function # 04	**Address**	**Default**	
Zone Type	0250 - 0251	0 4	
Force Arm / Zone Bypass	0252	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0253	0 VDS-A EN=0/2	
Zone Pulse Count	0254	0 VDS-A EN=0	
Zone Lockout	0255	3	
Zone Tamper (DEOL)	0256	1	
Zone Status Report	0257	6 VDS-A EN=1/5/6/7	

Unverified Alarm Report / Cross Zone	0258	0 VDS-A EN=0	
Domestic No.	0259	0	
Zone Function # 05	**Address**	**Default**	
Zone Type	0260 - 0261	0 5	
Force Arm / Zone Bypass	0262	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0263	0 VDS-A EN=0/2	
Zone Pulse Count	0264	0 VDS-A EN=0	
Zone Lockout	0265	3	
Zone Tamper (DEOL)	0266	1	
Zone Status Report	0267	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0268	0 VDS-A EN=0	
Domestic No.	0269	0	
Zone Function # 06	**Address**	**Default**	
Zone Type	0270 - 0271	0 6	
Force Arm / Zone Bypass	0272	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0273	0 VDS-A EN=0/2	
Zone Pulse Count	0274	0 VDS-A EN=0	
Zone Lockout	0275	3	
Zone Tamper (DEOL)	0276	1	
Zone Status Report	0277	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0278	0 VDS-A EN=0	
Domestic No.	0279	0	
Zone Function # 07	**Address**	**Default**	
Zone Type	0280 - 0281	0 7	
Force Arm / Zone Bypass	0282	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0283	0 VDS-A EN=0/2	
Zone Pulse Count	0284	0 VDS-A EN=0	
Zone Lockout	0285	3	
Zone Tamper (DEOL)	0286	1	
Zone Status Report	0287	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0288	0 VDS-A EN=0	
Domestic No.	0289	0	
Zone Function # 08	**Address**	**Default**	
Zone Type	0290 - 0291	0 8	

Force Arm / Zone Bypass	0292	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0293	0 VDS-A EN=0/2	
Zone Pulse Count	0294	0 VDS-A EN=0	
Zone Lockout	0295	3	
Zone Tamper (DEOL)	0296	1	
Zone Status Report	0297	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0298	0 VDS-A EN=0	
Domestic No.	0299	0	
Zone Function # 09	**Address**	**Default**	
Zone Type	0300 - 0301	0 9	
Force Arm / Zone Bypass	0302	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0303	0 VDS-A EN=0/2	
Zone Pulse Count	0304	0 VDS-A EN=0	
Zone Lockout	0305	3	
Zone Tamper (DEOL)	0306	1	
Zone Status Report	0307	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0308	0 VDS-A EN=0	
Domestic No.	0309	0	
Zone Function # 10	**Address**	**Default**	
Zone Type	0310 - 0311	1 0	
Force Arm / Zone Bypass	0312	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0313	0 VDS-A EN=0/2	
Zone Pulse Count	0314	0 VDS-A EN=0	
Zone Lockout	0315	3	
Zone Tamper (DEOL)	0316	1	
Zone Status Report	0317	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0318	0 VDS-A EN=0	
Domestic No.	0319	0	
Zone Function # 11	**Address**	**Default**	
Zone Type	0320 - 0321	1 1	
Force Arm / Zone Bypass	0322	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0323	0 VDS-A EN=0/2	
Zone Pulse Count	0324	0 VDS-A EN=0	
Zone Lockout	0325	3	

Zone Tamper (DEOL)	0326	1	
Zone Status Report	0327	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0328	0 VDS-A EN=0	
Domestic No.	0329	0	
Zone Function # 12	**Address**	**Default**	
Zone Type	0330 - 0331	1 2	
Force Arm / Zone Bypass	0332	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0333	0 VDS-A EN=0/2	
Zone Pulse Count	0334	0 VDS-A EN=0	
Zone Lockout	0335	3	
Zone Tamper (DEOL)	0336	1	
Zone Status Report	0337	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0338	0 VDS-A EN=0	
Domestic No.	0339	0	
Zone Function # 13	**Address**	**Default**	
Zone Type	0340 - 0341	1 3	
Force Arm / Zone Bypass	0342	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0343	0 VDS-A EN=0/2	
Zone Pulse Count	0344	0 VDS-A EN=0	
Zone Lockout	0345	3	
Zone Tamper (DEOL)	0346	1	
Zone Status Report	0347	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0348	0 VDS-A EN=0	
Domestic No.	0349	0	
Zone Function # 14	**Address**	**Default**	
Zone Type	0350 - 0351	1 4	
Force Arm / Zone Bypass	0352	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0353	0 VDS-A EN=0/2	
Zone Pulse Count	0354	0 VDS-A EN=0	
Zone Lockout	0355	3	
Zone Tamper (DEOL)	0356	1	
Zone Status Report	0357	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0358	0 VDS-A EN=0	
Domestic No.	0359	0	

Zone Function # 15	**Address**	**Default**	
Zone Type	0360 - 0361	1 5	
Force Arm / Zone Bypass	0362	3 VDS-A EN=0/2	
Silent Alarm / Chime Mode	0363	0 VDS-A EN=0/2	
Zone Pulse Count	0364	0 VDS-A EN=0	
Zone Lockout	0365	3	
Zone Tamper (DEOL)	0366	1	
Zone Status Report	0367	6 VDS-A EN=1/5/6/7	
Unverified Alarm Report / Cross Zone	0368	0 VDS-A EN=0	
Domestic No.	0369	0	

For the value range of each zone function option, see Zone Function options below.

Zone Function Options

Zone Function Option		**Description**
Zone Type	00	Zone Not Used
	01	Instant
	02	Interior Instant
	03	Delay
	04	Interior Delay
	05	Follower
	06	Interior Follower
	07	24-Hour
	08	Key-Switch Toggle
	09	Key Switch on/off
	10	24 Hour Panic
	11	24 Hour Fire
	12	24 Hour Fire With Verification
	13	Tamper
	14	Bolt Contact
	15	External Fault
	16	Delay Exit
	17	Interior Delay Exit
	18	Technical Alarm
	19	Reset

	20	Instant Report
	21	Reserved
Force Arm / Bypass	0	Disabled
	1	Force Arm
	2	Bypass
	3	All
Silent Alarm / Chime Mode	0	Disabled
	1	Silent Alarm
	2	Chime Mode
	3	All
Zone Pulse count	0	Disabled
	1-9	1-9 Pulses
Zone Lockout	0	Disabled
	1	1 Times Alarm Lockout
	2	3 Times Alarm Lockout
	3	6 Times Alarm Lockout
	4	Alarm Duration
Zone Tamper (DEOL)	0	Disabled
	1	Enabled
Zone Status Report	0	No Report Required
	1	Receiver 1
	2	Receiver 2
	3	Receiver 3
	4	Receiver 4
	5	Receiver 1, 2, 3 and 4
	6	Receiver 1 (2, 3 and 4 for backup)
	7	Receiver 1 (2 for backup) and Receiver 3 (4 for backup)
Unverified Alarm Report / Cross Zone	0	Disabled
	1	Unverified Alarm Report
	2	Cross Zone
	3	All
Domestic Call		Follow 'Alarm report' Option's Logic. Range 0-7
	0	No Reports Allowed
	1	Report to Destination 1

	2	Report to Destination 2
	3	Report to Destination 3
	4	Report to Destination 4
	5	Report to Destination 1 ,2, 3, 4
	6	Report to Destination 1 (2, 3, 4 backup)
	7	Report to Destination 1 (2 Backup) and 3 (4 backup)

Common Area Settings

Option	Address	Default	Value Range
Common Area Type	0370	0	0 = none 1 = Follow Partition 2 2 = Follow Partition 2-3 3 = Follow Partition 2-4 4 = Follow Partition 2-5 5 = Follow Partition 2-6 6 = Follow Partition 2-7 7 = Follow Partition 2-8 8 = Follow Partition 2-9 9 = Follow Partition 2-10 10 = Follow Partition 2-11 11 = Follow Partition 2-12 12 = Follow Partition 2-13 13 = Follow Partition 2-14 14 = Follow Partition 2-15 15 = Follow Partition 2-16

Notice!

In case of common Area, the Area 1 will be the common Area. When there is only 1 Area in the system, the address 0370 can only be programmed as 1.

Zone Area, Zone Functions and Module Selection

Zone No	Area Selection Address	Default	Zone Function Selection Address	Default	Module Selection Address	Default
1	0678 - 0679	01	0806	3	0870	0
2	0680 - 0681	01	0807	1	0871	0
3	0682 - 0683	01	0808	1	0872	0
4	0684 - 0685	01	0809	1	0873	0
5	0686 - 0687	01	0810	1	0874	0
6	0688 - 0689	01	0811	1	0875	0
7	0690 - 0691	01	0812	1	0876	0
8	0692 - 0693	01	0813	1	0877	0
9	0694 - 0695	01	0814	0	0878	0
10	0696 - 0697	01	0815	0	0879	0
11	0698 - 0699	01	0816	0	0880	0
12	0700 - 0701	01	0817	0	0881	0
13	0702 - 0703	01	0818	0	0882	0
14	0704 - 0705	01	0819	0	0883	0
15	0706 - 0707	01	0820	0	0884	0
16	0708 - 0709	01	0821	0	0885	0
	Value Range: 00 = zone not used, 1 - 16 = Area 1- 16		Value Range:0 –15. See Section Zone Functions		0 = On-board zone 1 = Keypad Zone 2 = DX2010 Zone 3 = RF Device 15 = not used	

Notice!
Zones may be indicated on keypads with a number that are different from zone number used for programming and hardware input.

Example:
In a one area system keypad zone number 17 should be indicated as Zone number 16 (e.g. visible on 16 zone LED keypad). After disabling zone 16 * (or another one in range 1 to 16) zone number 17 is indicated on keypad as number 16.
* change Area Selection to 00 = zone not used

Notice!
When a zone is assigned to RF Device (3), then the dedicated On-board zone is not available.

Zone No	Area Selection Address	Default	Zone Function Selection Address	Default	Module Selection Address	Default
17	0710 - 0711	00	0822	1	0886	15
18	0712 - 0713	00	0823	1	0887	15
19	0714 - 0715	00	0824	1	0888	15
20	0716 - 0717	00	0825	1	0889	15
21	0718 - 0719	00	0826	1	0890	15
22	0720 - 0721	00	0827	1	0891	15
23	0722 - 0723	00	0828	1	0892	15
24	0724 - 0725	00	0829	1	0893	15
25	0726 - 0727	00	0830	1	0894	15
26	0728 - 0729	00	0831	1	0895	15
27	0730 - 0731	00	0832	1	0896	15
28	0732 - 0733	00	0833	1	0897	15
29	0734 - 0735	00	0834	1	0898	15
30	0736 - 0737	00	0835	1	0899	15
31	0738 - 0739	00	0836	1	0900	15
32	0740-0741	00	0837	1	0901	15
	Value Range: 00 = zone not used, 1 - 16 = Area 1- 16		Value Range:0 –15. See Section Zone Functions		0 = On-board zone 1 = Keypad Zone * 2 = DX2010 Zone ** 3 = RF Device 15 = not used	

* Zones 17 to 32 are dedicated to Keypad 1 to 32 (Zone 17 = Keypad 1, Zone 32 = Keypad 32)
** Zones 17 to 24 are dedicated to DX2010 address 103 ports 1 to 8, also see , *page 124*
Zones 25 to 32 are dedicated to DX2010 address 104 ports 1 to 8, also see , *page 124*

Notice!
When a zone is assigned to Keypad Zone (1) or RF Device (3), then the dedicated zone on DX2010 is not available.

Zone No	Area Selection Address	Default	Zone Function Selection Address	Default	Module Selection Address	Default
33	0742 - 0743	00	0838	1	0901	15
34	0744 - 0745	00	0839	1	0902	15
35	0746 - 0747	00	0840	1	0903	15
36	0748 - 0749	00	0841	1	0904	15
37	0750 - 0751	00	0842	1	0905	15
38	0752 - 0753	00	0843	1	0906	15
39	0754 - 0755	00	0844	1	0907	15
40	0756 - 0757	00	0845	1	0908	15
41	0758 - 0759	00	0846	1	0909	15
42	0760 - 0761	00	0847	1	0910	15
43	0762 - 0763	00	0848	1	0911	15
44	0764 - 0765	00	0849	1	0912	15
45	0766 - 0767	00	0850	1	0913	15
46	0768 - 0769	00	0851	1	0915	15
47	0770 - 0771	00	0852	1	0916	15
48	0772 - 0773	00	0853	1	0917	15
49	0774 - 0775	00	0854	1	0918	15
50	0776 - 0777	00	0855	1	0919	15
51	0778 - 0779	00	0856	1	0920	15
52	0780 - 0781	00	0857	1	0921	15
53	0782 - 0783	00	0858	1	0922	15
54	0784 - 0785	00	0859	1	0923	15
55	0786 - 0787	00	0860	1	0924	15
56	0788 - 0789	00	0861	1	0925	15
57	0790 - 0791	00	0862	1	0926	15
58	0792 - 0793	00	0863	1	0927	15
59	0794 - 0795	00	0864	1	0928	15
60	0796 - 0797	00	0865	1	0929	15
61	0798 - 0799	00	0866	1	0930	15
62	0800 - 0801	00	0867	1	0931	15
63	0802 - 0803	00	0868	1	0932	15

64	0804 - 0805	00	0869	1	0933	15
	Value Range: 00 = zone not used, 1 - 16 = Area 1-16		Value Range:0–15. See Section Zone Functions.		0 = On-board zone 1 = Keypad Zone 2 = DX2010 Zone * 3 = RF Device 15 = not used	

* See next table

Notice!
When a zone is assigned to RF Device (3), then the dedicated zone on DX2010 is not available.

Module	**Address**
DX2010 module 1 (zones 17 - 24)	103
DX2010 module 2 (zones 25 - 32)	104
DX2010 module 3 (zones 33 - 40)	105
DX2010 module 4 (zones 41 - 48)	106
DX2010 module 5 (zones 49 - 56)	107
DX2010 module 6 (zones 57 - 64)	108

9.3 Output Programming

On-board Output Programming

Option		**Address**	**Default**	
Keypad Alarm Tone, 0 = Disabled, 1 = Enabled		0503	1	
Siren Running Time, 00 - 99 = 0 - 99 minutes		0508 - 0509	00	
See The Value Ranges of Output Programming Options				
Output 1	Output Event Type	0510 - 0511	05 VDS-A EN=5	
	Output Area / Zone	0512 - 0513	00	
	Output Mode	0514	0 VDS-A EN=0	
	Output Time	0515 - 0517	180 VDS-A EN=180	
Output 2	Output Event Type	0518 - 0519	05 VDS-A EN=5	
	Output Area / Zone	0520 - 0521	00	
	Output Mode	0522	0 VDS-A EN=0	
	Output Time	0523 - 525	000 VDS-A EN=180	

Output 3	Output Event Type	0526 - 0527	05 VDS-A EN=5	
	Output Area / Zone	0528 - 0529	00	
	Output Mode	0530	0 VDS-A EN=0	
	Output Time	0531 - 0533	180 VDS-A EN=180	
Output 4	Output Event Type	0534 - 0535	07 VDS-A EN=5	
	Output Area / Zone	0536 - 0537	00	
	Output Mode	0538	0 VDS-A EN=0	
	Output Time	0539 - 0541	180 VDS-A EN=180	

Notice!
When the zone activating alarm is programmed as silent alarm, keypad and audible alarm have no output.

For the corresponding value ranges of output event type, output mode and output time as well as the relationship between output event type and Output in area see The Value Ranges of Output Programming Options

The Value Ranges of Output Programming Options

Output Event Type		**Description**	**Output Area / Zone**
Output Event	0	Not Used	No
	1	System Disarmed	0 = All Areas 1 – 16 = Areas 1 - 16
	2	System Armed	
	3	System Alarm	0 = Any Area, 1 - 16 = Areas 1 - 16
	4	System Alarm (audile and silent)	
	5	External AWAY Siren	
	6	External STAY Siren	
	7	Internal Siren	
	8	Internal Siren with tamper	
	9	Entry/Exit Delay Warning	1 - 16 = Areas 1 - 16
	10	Telephone Line Fault	
	11	AC Power Supply Fault	
	12	Low Battery	
	13	Tamper	0 = Any Area, 1 - 16 = Areas 1 - 16
	14	External Fault	

	15	All Faults	
	16	Fire Alarm	0 = Any Area, 1 - 16 = Areas 1 - 16
	17	Fire Reset	
	18	AWAY Armed	0 = All Areas 1 - 16 = Areas 1 - 16
	19	STAY Armed	
	20	Reset *1	0 = Any Area 1 - 16 = Area number
	21	Follow Zone Event (Alarm and tamper)	Zone Number 1 - 64
	22	RF Keyfob button 3 (Garage Door)	0 = Any Area, 1 - 16 = Areas 1 - 16
	23	RF Keyfob button 4 (light)	
	24	Chime Indication *1	
	25	Verfied Alarm	
	26	Unverfied Alarm	
	27	Technical Alarm	
	28	Bypassed Zone	
	29	Ready to Arm	0 = All Areas 1 - 16 = Areas 1 - 16
	30	Walktest	
Output Mode	0	Continuous output	
	1	Pulse	
	2	Inverted	
Output Time	000 - 999	0 - 999 seconds	

*1 Output Timer is fix. (1 sec)

DX3010 Output Programming
This section is optional programming.

Module	Address
DX3010 module 1 (Output 5 - 12)	150
DX3010 module 2 (Output 13 - 20)	151

Table 9.2: DX3010 Address Settings

DX3010 1 Output Programming

Address 0542 - 0605			
See The Value Ranges of Output Programming Options			
Output 5	**Address**	**Default**	

Output Event Type	0542 - 0543	00	
Output Area / Zone	0544 - 0545	00	
Output Mode	0546	0	
Output Time	0547 - 0549	000	
Output 6	**Address**	**Default**	
Output Event Type	0550 - 0551	00	
Output Area / Zone	0552 - 0553	00	
Output Mode	0554	0	
Output Time	0555 - 0557	000	
Output 7	**Address**	**Default**	
Output Event Type	0558 - 0559	00	
Output Area / Zone	0560 - 0561	00	
Output Mode	0562	0	
Output Time	0563 - 0565	000	
Output 8	**Address**	**Default**	
Output Event Type	0566 - 0567	00	
Output Area / Zone	0568 - 0569	00	
Output Mode	0570	0	
Output Time	0571 - 0573	000	
Output 9	**Address**	**Default**	
Output Event Type	0574 - 0575	00	
Output Area / Zone	0576 - 0577	00	
Output Mode	0578	0	
Output Time	0579 - 0581	000	
Output 10	**Address**	**Default**	
Output Event Type	0582 - 0583	00	
Output Area / Zone	0584 - 0585	00	
Output Mode	0586	0	
Output Time	0587 - 0589	000	
Output 11	**Address**	**Default**	
Output Event Type	0590 - 0591	00	
Output Area / Zone	0592 - 0593	00	
Output Mode	0594	0	
Output Time	0595 - 0597	000	

Output 12	**Address**	**Default**	
Output Event Type	0598 - 0599	00	
Output Area / Zone	0600 - 0601	00	
Output Mode	0602	0	
Output Time	0603 - 0605	000	

DX3010 2 Output Programming

Address 0606 - 0669			
See The Value Ranges of Output Programming Options			
Output 13	**Address**	**Default**	
Output Event Type	0606 - 0607	00	
Output Area / Zone	0608 - 0609	00	
Output Mode	0610	0	
Output Time	0611 - 0613	000	
Output 14	**Address**	**Default**	
Output Event Type	0614 - 0615	00	
Output Area / Zone	0616 - 0617	00	
Output Mode	0618	0	
Output Time	0619 - 0621	000	
Output 15	**Address**	**Default**	
Output Event Type	0622 - 0623	00	
Output Area / Zone	0624 - 0625	00	
Output Mode	0626	0	
Output Time	0627 - 0629	000	
Output 16	**Address**	**Default**	
Output Event Type	0630 - 0631	00	
Output Area / Zone	0632 - 0633	00	
Output Mode	0634	0	
Output Time	0635 - 0637	000	
Output 17	**Address**	**Default**	
Output Event Type	0638 - 0639	00	
Output Area / Zone	0640 - 0641	00	
Output Mode	0642	0	
Output Time	0643 - 0645	000	

Output 18	**Address**	**Default**	
Output Event Type	0646 - 0647	00	
Output Area / Zone	0648 - 0649	00	
Output Mode	0650	0	
Output Time	0651 - 0653	000	
Output 19	**Address**	**Default**	
Output Event Type	0654 - 0655	00	
Output Area / Zone	0656 - 0657	00	
Output Mode	0658	0	
Output Time	0659 - 0661	000	
Output 20	**Address**	**Default**	
Output Event Type	0662 - 0663	00	
Output Area / Zone	0664 - 0665	00	
Output Mode	0666	0	
Output Time	0667 - 0669	000	

9.4 Access Codes

Digits of Code

Option	**Address**	**Default**	
Code Length,4 – 6 = 4 - 6 digits	1003	4	

The access code includes installer Code and user codes.
If the code is set as "15", then code is not used.
The code length is the same for all Access Codes.

Installer Code

Option	**Address**	**Default**
Installer Code	1004	1
	1005	2
	1006	3
	1007	4
	1008	5
	1009	6

User Codes

User No.	User Authority Level Address	Default/ Value Range	Area Selection Address	Default / Value Range	User Code Address	Default
# 01 (master code)	1010	Default: 0 # 01 master code Priority is always 0	1011 - 1012	Default: 00 Value Range: See Table 6.5 on page 26.		
					1013	2
					1014	5
					1015	8
					1016	0
					1017	0
					1018	0
#02	1019	Default: 15 Value Range: 0= Master code 1= Super code: 2= Basic code 3= Arming code 4= Duress code 5-15= No Priority	1020 - 1021	Default: 15 1020 = 1 1021 = 5	1022 - 1027	
#03	1028		1029 - 1030		1031 - 1036	
#04	1037		1038 - 1039		1040 - 1045	
#05	1046		1047 -1048		1049 - 1054	
#06	1055		1056 - 1057		1058 - 1063	
#07	1064		1065 - 1066		1067 - 1072	
#08	1073		1074 - 1075		1076 - 1081	
#09	1082		1083 - 1084		1085 - 1090	
#10	1091		1092 - 1093		1094 - 1099	
#11	1100		1101 - 1102		1103 - 1108	
#12	1109		1110 - 1111		1112 - 1117	
#13	1118		1119 - 1120		1121 - 1126	
#14	1127		1128 - 1129		1130 - 1135	
#15	1136		1137 - 1138		1139 - 1144	
#16	1145		1146 - 1147		1148 - 1153	
#17	1154		1155 - 1156		1157 - 1162	
#18	1163		1164 - 1165		1166 - 1171	
#19	1172		1173 - 1174		1175 - 1180	
#20	1181		1182 - 1183		1184 - 1189	
#21	1190		1191 - 1192		1193 - 1198	
#22	1199		1200 - 1201		1202 - 1207	
#23	1208		1209 - 1210		1211 - 1216	
#24	1217		1218 - 1219		1220 - 1225	

#25	1226
#26	1235
#27	1244
#28	1253
#29	1262
#30	1271
#31	1280
#32	1289
#33	1298
#34	1307
#35	1316
#36	1325
#37	1334
#38	1343
#39	1352
#40	1361
#41	1370
#42	1379
#43	1388
#44	1397
#45	1406
#46	1415
#47	1424
#48	1433
#49	1442
#50	1451
#51	1460
#52	1469
#53	1478
#54	1487
#55	1496
#56	1505
#57	1514
#58	1523

1227 - 1228	
1236 - 1237	
1254 - 1246	
1254 - 1255	
1263 - 1264	
1272 - 1273	
1281 - 1282	
1290 - 1291	
1299 - 1300	
1308 - 1309	
1317 - 1318	
1326 - 1327	
1335 - 1336	
1344 - 1345	
1353 - 1354	
1362 - 1363	
1371 - 1372	
1380 - 1381	
1389 - 1390	
1398 - 1399	
1407 - 1408	
1416 - 1417	
1425 - 1426	
1434 - 1435	
1443 - 1444	
1452 - 1453	
1461 - 1462	
1470 - 1471	
1479 - 1480	
1488 - 1489	
1497 - 1498	
1506 - 1507	
1515 - 1516	
1524 - 1525	

1229 - 1234	
1238 - 1243	
1247 - 1252	
1256 - 1261	
1265 - 1270	
1274 - 1279	
1283 - 1288	
1292 - 1297	
1301 - 1306	
1310 - 1315	
1319 - 1324	
1328 - 1333	
1337 - 1342	
1346 - 1351	
1355 - 1360	
1364 - 1369	
1373 - 1378	
1382 - 1387	
1391 - 1396	
1400 - 1405	
1409 - 1414	
1418 - 1423	
1427 - 1432	
1436 - 1441	
1445 - 1450	
1454 - 1459	
1463 - 1468	
1472 - 1477	
1481 - 1486	
1490 - 1495	
1499 - 1504	
1508 - 1513	
1517 - 1522	
1526 - 1531	

#59	1532		1533 - 1534		1535 - 1540		
#60	1541		1542 - 1543		1544 - 1549		
#61	1550		1551 - 1552		1553 - 1558		
#62	1559		1560 - 1561		1562 - 1567		
#63	1568		1569 - 1570		1571 - 1576		
#64	1577		1578 - 1579		1580 - 1585		

Value	Area															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
0																
1	X															
2		X														
3	X	X														
4			X													
5	X		X													
6		X	X													
7	X	X	X													
8				X												
9	X			X												
10		X		X												
11	X	X		X												
12			X	X												
13	X		X	X												
14		X	X	X												
15	X	X	X	X												
16					X											
17						X										
18					X	X										
19							X									
20					X		X									
21						X	X									
22					X	X	X									
23								X								
24					X			X								
25						X		X								
26					X	X		X								
27							X	X								
28					X		X	X								
29						X	X	X								
30					X	X	X	X								
31									X							

32										X						
33									X	X						
34											X					
35									X		X					
36										X	X					
37									X	X	X					
38												X				
39									X			X				
40										X		X				
41									X	X		X				
42											X	X				
43									X		X	X				
44										X	X	X				
45									X	X	X	X				
46													X			
47														X		
48													X	X		
49															X	
50													X		X	
51														X	X	
52													X	X	X	
53																X
54													X			X
55														X		X
56													X	X		X
57															X	X
58													X		X	X
59														X	X	X
60													X	X	X	X
61	X	X	X	X	X	X	X	X								
62	X	X	X	X					X	X	X	X				
63					X	X	X	X	X	X	X	X				
64	X	X	X	X	X	X	X	X	X	X	X	X				
65	X	X	X	X									X	X	X	X

66					X	X	X	X					X	X	X	X
67	X	X	X	X	X	X	X	X					X	X	X	X
68									X	X	X	X	X	X	X	X
69	X	X	X	X					X	X	X	X	X	X	X	X
70					X	X	X	X	X	X	X	X	X	X	X	X
71	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 9.3: The Distribution of Personal Identification Number in Areas

9.5 System Programming

Exit Delay

Area	**Address**	**Default**	
1	0403 - 0405	045	
2	0409 - 0411	045	
3	0415 - 0417	045	
4	0421 - 0423	045	
5	0427 - 0429	045	
6	0433 - 0435	045	
7	0439 - 0441	045	
8	0445 - 0447	045	
9	0451 - 0453	045	
10	0457 - 0459	045	
11	0463 - 0465	045	
12	0469 - 0471	045	
13	0475 - 0477	045	
14	0481 - 0483	045	
15	0487 - 0489	045	
16	0493 - 0495	045	
000 - 999 seconds			

Entry Delay

Area	Address	Default	
1	0406 - 0408	030	
2	0412 - 0414	030	
3	0418 - 0420	030	
4	0424 - 0426	030	
5	0430 - 0432	030	
6	0436 - 0438	030	
7	0442 - 0444	030	
8	0448 - 0450	030	
9	0454 - 0456	030	
10	0460 - 0462	030	
11	0466 - 0468	030	
12	0472 - 0474	030	
13	0478 - 0480	030	
14	0484 - 0486	030	
15	0490 - 0492	030	
16	0496 - 0498	030	
000 - 999 seconds EN= 045 seconds			

Keypad

Keypad No. in Area	Address	Default	
1	1586 - 1587	01	
2	1588 - 1589	99	
3	1590 - 1591	99	
4	1592 - 1593	99	
5	1594 - 1595	99	
6	1596 - 1597	99	
7	1598 - 1599	99	
8	1600 - 1601	99	
9	1602 - 1603	99	
10	1604 - 1605	99	
11	1606 - 1607	99	
12	1608 - 1609	99	
13	1610 - 1611	99	
14	1612 - 1613	99	
15	1614 - 1615	99	
16	1616 - 1617	99	

Table 9.4: Keypad Area Settings

00 = Master Keypad
00-16 = Area
99 = not used

Notice!

The system supports up to 16 master keypads. When the master keypad is not switched to the corresponding Area, no Arming/disarming, bypass and alarm reset operations can be performed on the master keypad. Only by switching the master keypad to the corresponding Area, operations can be performed to the Area.

Keypad Lockout

Address 0499	Address	Default	
0 = disabled 1-15 times	0499	10 VDS-A EN=10	

Quick Arming

Address 0500	Address	Default	
0 = disabled 1= Enable	0500	1 VDS-A EN=0	

Display and Prompt Tone of Date and Time Fault

Address 0501	Address	Default	
0 = disabled 1= Enable	0501	0 VDS-A EN=1	

Fault Prompt Tone

Address 0502	Address	Default	
0 = disabled 1= Enable	0502	1 VDS-A EN=1	

Printer Functionality

Address 0940	Address	Default	
0 = disabled 1= Enable	0940	0	

RF Receiver

Address 0941	Address	Default	
0 = disabled 1= Enable	0941	0	

RF supervision

Address 0942	Address	Default	
0 = disable 1 = 1h 2 = 2h 3 = 4h 4 = 12 h 5 = 24h 6 = 2.5h	0942	4	

RF Jam Detect Level

Address 0943	Address	Default	
0-15 0 = most sensitive	0943	12	

RF Device Low Level Battery Resound

Address 0944	Address	Default	
0 = disable 1 = 4h 2 = 24h	0944	2	

Siren Beep Arm/Disarm (RF Keyfob)

Address 0945	Address	Default	
0 = disable 1 = Enable	0945	1	

RF Keyfob Panic Option

Address 0946	Address	Default	
0 = No alarm 1 = Silent alarm 2 = Non silent alarm	0946	0	

RF ID Devices

Sensor	Address	Default	Sensor	Address	Default	Sensor	Address	Default
1	1700 – 1708	15	23	1920 – 1928	15	45	2140 – 2148	15
2	1710 – 1718	15	24	1930 – 1938	15	46	2150 – 2158	15
3	1720 – 1728	15	25	1940 – 1948	15	47	2160 - 2168	15
4	1730 – 1738	15	26	1950 – 1958	15	48	2170 – 2178	15
5	1740 – 1748	15	27	1960 – 1968	15	49	2180 – 2188	15
6	1750 – 1758	15	28	1970 – 1978	15	50	2190 – 2198	15
7	1760 – 1768	15	29	1980 – 1988	15	51	2200 – 2208	15
8	1770 – 1778	15	30	1990 – 1998	15	52	2210 – 2218	15
9	1780 – 1788	15	31	2000 – 2008	15	53	2220 – 2228	15
10	1790 – 1798	15	32	2010 – 2018	15	54	2230 – 2238	15
11	1800 – 1808	15	33	2020 – 2028	15	55	2240 – 2248	15
12	1810 – 1818	15	34	2030 – 2038	15	56	2250 – 2258	15
13	1820 – 1828	15	35	2040 – 2048	15	57	2260 – 2268	15
14	1830 – 1838	15	36	2050 – 2058	15	58	2270 – 2278	15
15	1840 – 1848	15	37	2060 – 2068	15	59	2280 – 2288	15
16	1850 – 1858	15	38	2070 – 2078	15	60	2290 – 2298	15
17	1860 – 1868	15	39	2080 – 2088	15	61	2300 – 2308	15
18	1870 – 1878	15	40	2090 – 2098	15	62	2310 – 2318	15

19	1880 – 1888	15	41	2100 – 2108	15	63	2320 – 2328	15
20	1890 – 1898	15	42	2110 – 2118	15	64	2330 - 2338	15
21	1900 – 1908	15	43	2120 – 2128	15			
22	1910 – 1918	15	44	2130 - 2138	15			

Each RFID Device has nine digits. Each digit range is 0 to 9. The default value is 15, not in use.

Wireless Repeater RF ID

Repeater	Address	Default	
1	2340 – 2348	15	
2	2350 – 2358	15	
3	2360 – 2368	15	
4	2370 – 2378	15	
5	2380 – 2388	15	
6	2390 – 2398	15	
7	2400 – 2408	15	
8	2410 - 2418	15	

Transmitter RF ID

Keyfob	Address		Keyfob	Address	
1	2420 – 2428		33	2740 – 2748	
2	2430 – 2438		34	2750 – 2758	
3	2440 – 2448		35	2760 – 2768	
4	2450 – 2458		36	2770 – 2778	
5	2460 – 2468		37	2780 – 2788	
6	2470 – 2478		38	2790 – 2798	
7	2480 – 2488		39	2800 – 2808	
8	2490 – 2498		40	2810 – 2818	
9	2500 – 2508		41	2820 – 2828	
10	2510 – 2518		42	2830 – 2838	
11	2520 – 2528		43	2840 – 2848	
12	2530 – 2538		44	2850 – 2858	
13	2540 – 2548		45	2860 – 2868	
14	2550 – 2558		46	2870 – 2878	
15	2560 – 2568		47	2880 – 2888	
16	2570 – 2578		48	2890 – 2898	
17	2580 – 2588		49	2900 – 2908	
18	2590 – 2598		50	2910 – 2918	
19	2600 – 2608		51	2920 - 2928	
20	2610 – 2618		52	2930 – 2938	
21	2620 – 2628		53	2940 – 2948	
22	2630 – 2638		54	2950 – 2958	
23	2640 – 2648		55	2960 – 2968	
24	2650 – 2658		56	2970 – 2978	
25	2660 – 2668		57	2980 – 2988	
26	2670 – 2678		58	2990 – 2998	
27	2680 – 2688		59	3000 – 3008	
28	2690 – 2698		60	3010 – 3018	
29	2700 – 2708		61	3020 – 3028	
30	2710 – 2718		62	3030 – 3038	
31	2720 – 2728		63	3040 – 3048	
32	2730 – 2738		64	3050 – 3058	

Keyfob	Address		Keyfob	Address	
65	3060 – 3068		97	3380 – 3388	
66	3070 – 3078		98	3390 – 3398	
67	3080 – 3088		99	3400 – 3408	
68	3090 – 3098		100	3410 – 3418	
69	3100 – 3108		101	3420 – 3428	
70	3110 – 3118		102	3430 – 3438	
71	3120 – 3128		103	3440 – 3448	
72	3130 – 3138		104	3450 – 3458	
73	3140 – 3148		105	3460 – 3468	
74	3150 – 3158		106	3470 – 3478	
75	3160 – 3168		107	3480 – 3488	
76	3170 – 3178		108	3490 – 3498	
77	3180 – 3188		109	3500 – 3508	
78	3190 – 3198		110	3510 – 3518	
79	3200 – 3208		111	3520 – 3528	
80	3210 – 3218		112	3530 – 3538	
81	3220 – 3228		113	3540 – 3548	
82	3230 – 3238		114	3550 – 3558	
83	3240 – 3248		115	3560 – 3568	
84	3250 – 3258		116	3570 – 3578	
85	3260 – 3268		117	3580 – 3588	
86	3270 - 3278		118	3590 – 3598	
87	3280 – 3288		119	3600 – 3608	
88	3290 – 3298		120	3610 – 3619	
89	3300 – 3308		121	3620 – 3628	
90	3310 – 3318		122	3630 – 3638	
91	3320 – 3328		123	3640 – 3648	
92	3330 – 3338		124	3650 – 3658	
93	3340 – 3348		125	3660 – 3668	
94	3350 – 3358		126	3670 – 3678	
95	3360 – 3368		127	3680 – 3688	
96	3370 – 3378		128	3690 – 3698	

Assignment of Keyfobs is dynamically done by the System and cannot be changed.

All Keyfob RFID default values are 15.

RF Key Fob assignment to Areas

Number of Areas in the system	Area	Keyfobs Radion	Keyfobs DSRF
1	1	1 – 128	1 – 24
2	1	1 - 64	1 – 12
	2	65 - 128	13 – 24
3	1	1 - 43	1 - 8
	2	44 - 86	9 - 16
	3	87 - 128	17 - 24
4	1	1 - 32	1 - 6
	2	33 - 64	7 - 12
	3	65 - 96	13 - 18
	4	97 - 128	19 - 24
5	1	1 - 26	1 - 5
	2	27 - 52	6 - 10
	3	53 - 78	11 - 15
	4	79 - 103	16 - 20
	5	104 - 128	21 - 24
6	1	1 - 22	1 - 4
	2	23 - 44	5 - 8
	3	45 - 65	9 - 12
	4	66 - 86	13 - 16
	5	87 - 107	17 - 20
	6	108 - 128	21 - 24
7	1	1 - 19	1 - 4
	2	20 - 38	5 - 8
	3	39 - 56	9 - 12
	4	57 - 74	13 - 15
	5	75 - 92	16 - 18
	6	93 - 110	19 – 21
	7	111 - 128	22 - 24
8	1	1 – 16	1 – 3
	2	17 – 32	4 – 6
	3	33 – 48	7 – 9

Number of Areas in the system	Area	Keyfobs Radion	Keyfobs DSRF
	4	49 – 64	10 – 12
	5	65 – 80	13 – 15
	6	81 – 96	16 – 18
	7	97 – 112	19 – 21
	8	113 - 128	21 - 24
9	1	1 – 15	1 – 3
	2	16 – 30	4 – 6
	3	31 – 44	7 – 9
	4	45 – 58	10 – 12
	5	59 – 72	13 – 15
	6	73 – 86	16 – 18
	7	87 – 100	19 – 20
	8	101 – 114	21 – 22
	9	115 – 128	23 – 24
10	1	1 – 13	1 – 3
	2	14 – 26	4 – 6
	3	27 – 39	7 – 9
	4	40 – 52	10 – 12
	5	53 – 65	13 – 14
	6	66 – 78	15 – 16
	7	79 – 91	17 – 18
	8	92 – 104	19 – 20
	9	105 – 116	21 – 22
	10	117 – 128	23 – 24
11	1	1 – 12	1 - 3
	2	13 – 24	4 – 6
	3	25 – 36	7 - 8
	4	37 – 48	9 – 10
	5	49 – 60	11 – 12
	6	61 – 72	13 – 14
	7	73 – 84	15 – 16
	8	85 – 95	17 – 18
	9	96 – 106	19 – 20

Number of Areas in the system	Area	Keyfobs Radion	Keyfobs DSRF
	10	107 – 117	21 – 22
	11	118 – 128	23 – 24
12	1	1 – 11	1 - 2
	2	12 – 22	3 - 4
	3	23 – 33	5 – 6
	4	34 – 44	7 - 8
	5	45 – 55	9 – 10
	6	56 – 66	11 – 12
	7	67 – 77	13 – 14
	8	78 – 88	15 – 16
	9	89 – 98	17 – 18
	10	99 – 108	19 – 20
	11	109 – 118	21 – 22
	12	119 – 128	23 – 24
13	1	1 – 10	1 - 2
	2	11 - 20	3 - 4
	3	21 – 30	5 – 6
	4	31 – 40	7 - 8
	5	41 – 50	9 – 10
	6	51 – 60	11 – 12
	7	61 – 70	13 – 14
	8	71 – 80	15 – 16
	9	81 – 90	17 – 18
	10	91 – 100	19 – 20
	11	101 – 110	21 – 22
	12	111 – 119	23 – 23
	13	120 – 128	24 – 24
14	1	1 – 10	1 - 2
	2	11 - 20	3 - 4
	3	21 – 29	5 – 6
	4	30 – 38	7 - 8
	5	39 – 47	9 – 10
	6	48 – 56	11 – 12

Number of Areas in the system	Area	Keyfobs Radion	Keyfobs DSRF
	7	57 – 65	13 – 14
	8	66 – 74	15 – 16
	9	75 – 83	17 – 18
	10	84 – 92	19 – 20
	11	93 – 101	21 – 21
	12	102 – 110	22 – 22
	13	111 – 119	23 – 23
	14	120 – 128	24 - 24
15	1	1 – 9	1 - 2
	2	10 – 18	3 - 4
	3	19 – 27	5 – 6
	4	28 – 36	7 - 8
	5	37 – 45	9 – 10
	6	46 – 54	11 – 12
	7	55 – 63	13 – 14
	8	64 – 72	15 – 16
	9	73 – 80	17 – 18
	10	81 – 88	19 – 19
	11	89 – 96	20 – 20
	12	97 – 104	21 – 21
	13	105 – 112	22 – 22
	14	113 – 120	23 – 23
	15	121 - 128	24 - 24
16	1	1- 8	1 - 2
	2	9 – 16	3 – 4
	3	17 – 24	5 – 6
	4	25 – 32	7 – 8
	5	33 – 40	9 - 10
	6	41 - 48	11 - 12
	7	49 - 56	13 - 14
	8	57 - 64	15 - 16
	9	65 - 72	17
	10	73 – 80	18

Number of Areas in the system	Area	Keyfobs Radion	Keyfobs DSRF
	11	81 – 88	19
	12	89 - 96	20
	13	97 - 104	21
	14	105 - 112	22
	15	113 - 120	23
	16	121 - 128	24

Address 3700 - 3735	Address	Default	
Company Name	3700 - 3735	0	

Table 9.5: Assign Company Name

Company Name may have up to 18 characters. Each character of the zone name uses 2 addresses.

Example: A = 4 1, A = Address 3736 = 4, Address 3737 = 1

One character needs 2 values to enter into 2 addresses. Determine these values using the matrix of table below. Every character in this table has a row index and also a column index. Row Index is the first; column index is the second value for each character.

Example:

o = 6 15

k = 6 11

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2		!	"	#	$	%	&	'	(	)	*	+	-	,	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6	‘	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	
8	đ	Ą	ą	Ł	Ğ	..	Ć	Ś	Ű		Ş	İ	Ź	Ę	ź	Ż
9	Ń	ń	Č	ł	ğ	¨	ć	ś	ű	č	ş	I	Ţ	ę	ţ	ż
10	á	ł	¢	£	€	¥	Š	§	š	©	ª	«	¬	-	®	¯
11	°	±	²	³	Ž	µ	¶	•	ž	¹	º	»	Œ	œ	Ÿ	¿
12	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
13	Đ	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
14	à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
15	ð	ñ	ò	ó	ô	ô	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ

Table 9.6: Characters

Zone	Zone Name	Adress	Default	
1		3736 - 3771	0	
2		3772 - 3807	0	
3		3808 - 3843	0	
4		3844 - 3879	0	
5		3880 - 3915	0	
6		3916 - 3951	0	
7		3952 - 3987	0	
8		3988 - 4023	0	
9		4024 - 4059	0	
10		4060 - 4095	0	
11		4096 - 4131	0	
12		4132 - 4167	0	
13		4168 - 4203	0	
14		4204 - 4239	0	
15		4240 - 4275	0	
16		4276 - 4311	0	
17		4312 - 4347	0	
18		4348 - 4383	0	
19		4384 - 4419	0	
20		4420 - 4455	0	
21		4456 - 4491	0	
22		4492 - 4527	0	
23		4528 - 4563	0	
24		4564 - 4599	0	
25		4600 - 4635	0	
26		4636 - 4671	0	
27		4672 - 4707	0	
28		4708 - 4743	0	
29		4744 - 4779	0	
30		4780 - 4815	0	
31		4816 - 4851	0	
32		4852 - 4887	0	

Zone	Zone Name	Adress	Default	
33		4888 - 4923	0	
34		4924 - 4959	0	
35		4960 - 4995	0	
36		4996 - 5031	0	
37		5032 - 5067	0	
38		5068 - 5103	0	
39		5104 - 5139	0	
40		5140 - 5175	0	
41		5176 - 5211	0	
42		5212 - 5247	0	
43		5248 - 5283	0	
44		5284 - 5319	0	
45		5320 - 5355	0	
46		5356 - 5391	0	
47		5392 - 5427	0	
48		5428 - 5463	0	
49		5464 - 5499	0	
50		5500 - 5535	0	
51		5536 - 5571	0	
52		5572 - 5607	0	
53		5608 - 5643	0	
54		5644 - 5679	0	
55		5680 - 5715	0	
56		5716 - 5751	0	
57		5752 - 5787	0	
58		5788 - 5823	0	
59		5824 - 5859	0	
60		5860 - 5895	0	
61		5896 - 5931	0	
62		5932 - 5967	0	
63		5968 - 6003	0	
64		6004 - 6039	0	

Table 9.7: Assign Zone Names

Zone Name may have up to 18 characters. Each character of the zone name uses 2 addresses.
Example: A = 4 1, A = Address 3736 = 4, Address 3737 = 1

10 Keypad Usage and Operations

10.1 Keypad Operating Instructions

IUI-AMAX4-TEXT

IUI-AMAX3-LED8	IUI-AMAX3-LED16

IUI-AMAX-LED8	IUI-AMAX-LCD8

Quick Keypad Operation Instructions

Function	Command	D	A	B	S	M	IN
Arm / Disarm							
AWAY arm	[Code] + [#] / [#] (Quick arm)	√	√	√	√	√	√
STAY arm	[Code] + [*] / [*] (Quick arm)	√	√	√	√	√	√
Disarm	[Code] + [#]	√		√	√	√	√
Display							
Display Info (Fault/ Tamper..)	[Code] + [-]					√	√
Bypass							
Zone Bypass/Cancel	[Code] + [3][1] + [#] + [Zone No] [*] + [#] (Bypass)			√	√	√	√
	[Code] + [3][1] + [#] + [Zone No] [*] + [#] (Cancel LED)			√	√	√	√
	[Code] + [3][2] + [#] + [Zone No] [*] + [#] (Cancel Text KP)			√	√	√	√
Bypass Inquiry	[Code] + [3][3] + [#] (Text KP)			√	√	√	√
Bypass Fault/Tamper	[Code] + [3][4] + [#]					√	√
Reset							
Reset	[Code] + [6] + [#]					√	√

Alarm commands	
Keypad Emergency Alarm	Long press [1] and [3] or [*] and [#]
Keypad Fire	Long press [4] and [6]
Keypad Medical Alarm	Long press [7] and [9]

D = Duress User
A = Arming User
B = Basic User
S = Super User
M = Master User
IN = Install User

Function	Command	D	A	B	S	M	IN
Other Commands							
Switch to Main Keypad	[Code] + [0][0][0] + [#] (Text KP)				√	√	√
Switch to Partition 01-16	[Code] + [0][_][_] + [#]				√	√	√
Fault/Tamper Inquire	[Code] + [2][1] + [#]					√	√
Check All Event Log	[Code] + [2][2] + [#] (Text KP)					√	√
Check EN Event Log	[Code] + [2][3] + [#] (Text KP)					√	√
Check Dialer Event Log	[Code] + [2][4] + [#] (Text KP)					√	√
Siren test	[Code] + [4][1] + [#]					√	√
Communication test	[Code] + [4][2] + [#]					√	√
Walk test	[Code] + [4][3] + [#]					√	√
Change/View date/time	[Code] + [5][1] + [#]						√
Daylight Saving Time (+1h)	[Code] + [5][2] + [#]					√	√
Daylight Saving Time (-1h)	[Code] + [5][3] + [#]					√	√
Add / Delete / Change User	[Code] + [5][4] + [#]					√	√
Change Individual Code	[Code] + [5][5] + [#]					√	√
Change Domestic Phone No.1	[Code] + [5][6][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.2	[Code] + [5][6][#][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.3	[Code] + [5][6][#][#][#] + [_ _ _ _ _ _][#] (LED KP)						√
Change Domestic Phone No.4	[Code] + [5][6][#][#][#][#] + [_ _ _ _ _ _] [#] (LED KP)						√
Change Domestic Phone No.1-4	[Code] + [5][6][#] + [_] + [#] + [_ _ _ _ _ _][#] (Text KP)						√
Call Back	[Code] + [5][7] + [#]					√	√
Change Language	[Code] + [5][8] + [#] + [_] [_] + [#] 01=EN 02=DE 03=ES 04=FR 05=IT 06=PL 07=NL 08=SE					√	√
Installer Access	[Code] + [7][1] + [#] (Enable) [Code] + [7][2] + [#] (Disable)					√	
System reset	[Code] + [9][9][8][9] + [#]					√	√
Installer program mode	[Code] + [9][5][8] + [#]						√
Exits Progr. mode without save	[9][5][9] + [#] (only in Address Progr. Mode)						√

Exits Progr. mode with save	[9][6][0] + [#] (only in Address Progr. Mode)						√
Set Factory Defaults	[9][6][1] + [#] (only in Address Progr. Mode)						√
Copy control panel data to progr. Key	[9][6][2] + [#] (only in Address Progr. Mode)						√
Copy progr. key data to control panel.	[9][6][3] + [#] (only in Address Progr. Mode)						√
Display FW version	[9][9][9] + [#] (only in Address Progr. Mode)						√

D = Duress User
A = Arming User
B = Basic User
S = Super User
M = Master User
IN = Install User

Keypad Indicators

Keypad indicator icons	Status	Definition
1 2 3 .... ZONE (1-8)	on	Zone is triggered.
	off	Zone is normal.
	Fast flash (0.25 seconds lights on/ 0.25 seconds lights off)	Zone was alarmed or is in alarm status.
	Slow flash (1 second lights on/1 second lights off)	Zone is manually bypassed or interior Zone is in STAY ARM mode.
 AWAY	on	System is armed in AWAY mode.
	off	System not armed in AWAY mode.
	Slow flash (1 second lights on/1 second lights off)	Exit time.
	Fast flash (0.25 seconds lights on/ 0.25 seconds lights off)	Programming mode or Code function mode. STAY indicator flashes simultaneously.
 STAY	on	System is armed in STAY mode.
	off	System not armed in STAY mode.
	Slow flash (1 second lights on/1 second lights off)	Exit time.
	Fast flash (0.25 seconds lights on/ 0.25 seconds lights off)	Programming mode or Code function mode. AWAY indicator flashes simultaneously.When bypass function is performed, the STAY indicator only flashes.
 MAINS	on	AC main power is normal.
	Slow flash (1 second lights on/1 second lights off)	AC main power supply failed.
 FAULTS	on	System fault or Tamper condition is present.
	off	System is in normal status.
	Flashes	System fault or Tamper condition must be acknowledged.
	on	System is disarmed.

Keypad Sounds

Sound Indicator	Definition
One short beep	A keypad button has been pressed.
One single one- second beep	The requested operation is refused. Incorrect operation signal.
Two short beeps	The system accepted the code. The system executed the requested function.
One short beep every minute	Fault tone, unacknowledged system failure
One short beep every two seconds	Exit time started.
Continued sound	– Last 10s on exit time – Keypad fault/tamper sound (fault/tamper to be acknowledged) – Keypad alarm sound
Continuous 0.5 second beep, stops 0.5 seconds	Entry delay time (until alarm ends or system is disarmed).

10.2 Arming and Disarming the System

10.2.1 Arming the System

Arming the System

Notice!
When the number of incorrect code entries on the keypad reaches a specified number, the keypad will automatically lock for 180 seconds and alarm is reported. If the keypad is idle for 1 minute, the system will automatically exit from any operational mode.

Arming in AWAY Mode
Arming the system in AWAY Mode is normally performed when you leave the premises and require that all zones are activated in a ready state to detect an intrusion.

Keypad Arming
There are two methods to arm your system in AWAY Mode.
Method 1:
To arm the System in AWAY mode enter your code and press [#].
It beeps twice, the AWAY indicator flashes slow, and exit time starts.
After exit time, the AWAY indicator turns is lit.
Method 2:
To arm the System in AWAY mode press and hold [#] until it beeps twice.
The AWAY indicator flashes slow, and exit time starts. After exit time, the AWAY indicator is lit.
Please contact your installer to enable/disable this function.

Telephone Remote Arming
The user dials the control panel number. The control panel answers the call and issues a long beep. After the long beep, the user must press the [#] key. When the Panel receives the signal it will confirm the arming of the control panel with a high tone.
Please contact your installer to enable/disable this function.

Notice!
Telephone arming is possible when the system has only 1 assigned area.

Key Switch Arming
Users can use a key switch to Arm and Disarm the system. When the Key switch is activated, the AWAY indicator flashes slow and exit time starts. After exit time, the AWAY indicator is lit. When the Key switch is deactivated, the system is disarmed and Away indicator is off.

10.2.2 Disarming the System

Disarming with CODE
Enter your code and press [#] .It beeps twice and the AWAY or STAY indicator is extinguished.

Disarming with Key Switch
When the Key switch is deactivated, the system is disarmed and the AWAY or STAY indicator is extinguished.

10.3 Faults and Tamper Conditions

Whenever a system fault or tamper condition occurs, the FAULT or MAINS indicator flashes and the keypad beeps.

Notice!
Operation is only possible in disarmed status.

10.3.1 System Fault or Tamper Analysis Mode in LED Keypad

To enter fault or tamper analysis mode for determining a system fault or tamper condition:
a) Enter your Code + [2] [1] and press [#]. It beeps twice. The FAULT indicator remains lit and the STAY and AWAY indicators flash. The lit zone indicators indicate the type of fault or tamper condition that occurred.
b) For a multi-level menu, enter the corresponding number to enter the submenu, press [0] key to return to the main menu (see table next page).
c) To exit from Fault and Tamper Analysis Mode, press [#]. The STAY and AWAY indicators are extinguished and the FAULT indicator remains lit, and the keypad stops the beep.

Fault and Tamper Conditions

1 Accessory Module Failure
1 Network / IP Module 1 Failure
1 - 2 Network / IP Module 1 - 2 Failure
2 Output Expansion Module Failure
1 - 2 Output Expansion Module 1 - 2 Fault
3 Input Expansion Module Failure
1 - 6 Output Expansion Module 1 - 6 Fault
4 Printer Failure
1 Module DX4010 Missing
2 Printer Missing
3 Printer Fault
5 RF Receiver Failure
1 RF Receiver 1 Fault
2 RF Receiver 1 Missing
3 RF Receiver 1 Jammed
6 RF Sensor Failure
1 RF Sensor Missing *
2 RF Sensor Fault *
7 RF Repeater Failure
1 - 8 RF Repeater 1-8 Missing
8 RF Config Failure
1 Configuration Conflict Sensors *
2 Configuration Conflict Repeaters *
3 Configuration Conflict Keyfobs *
2 Power Failure
1 Panel AC Failure
2 Panel Low Battery
3 Panel Aux Power Failure
1 - 2 Panel Aux Power 1 - 2 Fault
4 Bosch Option Bus Power Failure
1 - 2 Bosch Option Bus 1 - 2 Power Fault
5 RF Repeater AC Power Failure
1 - 8 RF Repeater 1-8 AC Power Fault
6 RF Repeater Battery Failure
1 - 8 RF Repeater 1-8 Battery Fault
7 RF Sensor Power Failure *
8 RF Keyfob Battery Failure *

* One or more faults occur in this category will light this led.

3 Output Failure	
1 Onboard Output Failure	
	1 Onboard Output 1 Fault
	2 Onboard Output 2 Fault
4 Keypad Failure	
1 - 16	Keypad 1 – 16 Fault
5 System Failure	
1	Date Time not set
6 Communication Failure	
	1 Communication Fault 1
	2 Communication Fault 2
	3 Communication Fault 3
	4 Communication Fault 4
	5 Phone Line Fault
7 Tamper	
1 System Tamper	
2 Keypad Tamper	
1 - 16	Keypad 1 – 16 Tamper
3 Zone Expansion Module Tamper	
1 - 6	Zone Expansion Module 1 - 6 Tamper
4 Zone Tamper DEOL	
1 - 16	Sensor Tamper DEOL
5 Zone type Tamper	
1 - 16	Zone type Tamper
6 Keypad Lock out	
	1 Keypad Lock out
7 RF Receiver Tamper	
	1 RF Receiver Tamper
8 RF Repeater Tamper	
1 - 8	RF Repeater Tamper
8 External Failure	
1 - 16	External Fault Zone 1-16

10.3.2 System Fault or Tamper Analysis Mode in Text Keypad

To enter fault or tamper analysis mode for determining a system fault or tamper condition:
a) Enter your Code + [2] [1] and press [#]. It beeps twice.

b) Scroll down with [arrow] to display all trouble or fault conditions.

c) To exit from Fault and Tamper Analysis Mode, press [#].

10.4 System Test

10.4.1 Siren Test

This function allows the code holders to test the siren.
a) Enter your Code + [4] [1] and press [#]. It beeps twice and the siren will be activated for 1 second.

10.4.2 Communication Test

This function allows the code holders to send a test report to a central monitoring station.
a) Enter your Code + [4] [2] and press [#]. It beeps twice and a test report is send.
The Keypad will display the status of the test report for all communication paths.
To exit the test report press [#].

10.4.3 Walk Test Mode

This function allows code holders to test detection devices to ensure they are functioning correctly. Before activating Walk test Mode, bypass any zones that are not required for testing. During the walk test, no walk test report is sent out to the control panel system.

How to enter into Walk Test Mode:

1. Enter your Code + [4] [3] and press [#]. It beeps twice and the STAY and AWAY indicators flash.
2. Unseal and seal the zones to be tested. The keypad sounds one second beep and the siren sounds one beep each time when a Zone status is changed.

To exit Walk test Mode:

1. Enter your Code + [4] [3] and press [#].

10.5 Event Log Recall Mode

This function allows code holders to playback the last 254 events saved in each event log on the Text Keypad.

All Event Log	here all events are logged
EN Event Log	here only EN related events are logged
Dialer Event Log	here only Dialer related events are logged

How to enter Event Log Recall modes:
All Event Log
Enter your code + [2] [2] and press[#]. It beeps twice.

EN Event Log
Enter your code + [2] [3] and press [#]. It beeps twice.

Dialer Event Log
Enter your code + [2] [4] and press [#]. It beeps twice.

Press [▲] or [▼] to move up and down in the Event Logs
Press [#] To exit the Event Log

10.6 Reset the Control Panel

This function allows code holders to reset all Alarms, Faults and Tamper conditions.
Enter your code + [6][#].
The keypad beeps twice and the signal is eliminated.

Notice!
You can reset alarms, faults or tamper conditions, only when they are not active anymore.

10.7 Bypassing

10.7.1 Bypassing Zones

By bypassing Zones, one or more zones are disabled for one arming cycle. After bypassing a zone, you can arm the system even when a zone is in alarm state.

How to Bypass a Zone
a) Enter your code + [3] [1] and press [#]. The STAY indicator flashes fast.
b) Enter the zone number you wish to bypass, then press the [*] key.
(If you wish to bypass multiple zones, please repeat step b).
c) Press [#] to exit.

How to Unbypass a Zone
LED Keypad
a) Enter your code + [3] [1] and press [#] . The STAY indicator flashes fast.
b) Enter the zone number you wish to unbypass, then press the [*] key.
(If you wish to unbypass multiple zones, please repeat step b).
c) Press [#] to exit.

Text Keypad:
a) Enter your code + [3] [2] and press [#] . The STAY indicator flashes fast.
b) Enter the zone number you wish to unbypass, then press the [*] key.
(If you wish to unbypass multiple zones, please repeat step b)
d) Press [#] to exit.

Bypassing Faults and Tamper conditions (Except Zone Tampers)
One or more faults and tamper conditions are disabled for one arming cycle. After bypassing a Fault or Tamper condition, you can arm the system even when a Fault or Tamper condition exists.

How to bypass a Fault or Tamper Condition

a) Enter your code + [3] [4] and press [#]. It beeps twice.

Bypass Inquire
The bypass inquires displays all bypassed zones.
a) Enter your code + [3] [3] and press [#]. It beeps twice.
b) Move up and down with [▲] or [▼] to display all bypassed zones.
c) Press [#] to exit.

10.8 Codes

10.8.1 Add/Change and Delete User Code

This function allows Master User to Add/change and Delete User Codes.

How to Change the Code, User Code Priority and Area Assignment
LED Keypad:
a) Enter your User code + [5] [4] and press [#].
It beeps twice and the STAY and AWAY indicators start flashing.

b) Enter the user number (1-64) and press [#].
It beeps twice.
The corresponding Keypad indicator will light up for the current user permission level.
When AWAY and STAY indicators are flashing user permission level = 0.

c) Enter the user code priority (0-5) and press [#], there are no beeps to confirm the operation.
00 = Master User
01 = Super User
02 = Basic User
03 = Arming User
04 = Duress User
05-15 = No Permission
Refer to Quick Keypad Operation Instructions

d) Enter the first value (00-71) for the area assignment for this user and press [#], there are no beeps to confirm the operation.
The corresponding Keypad indicators will light up.
Enter the second value for the area assignment, and press [#], there are no beeps to confirm the operation.
The corresponding Keypad indicators will light up.
Please contact your installer for the right Values or check Table in Quick Reference Guide.

e) Enter the new user code (Default code length=4 digits / 5 or 6 digit code must be enabled through the installer) for this user and press [#].
It beeps twice and the STAY and AWAY indicators stop flashing.

Text Keypad:

a) Enter your code and press [5] [4] [#].
It beeps twice and the STAY and AWAY indicators start flashing.

b) Enter the user number (1-64) and press [#].

c) Enter the user code priority (0-15) and press [#].
00 = Master User
01 = Super User
02 = Basic User
03 = Arming User
04 = Duress User
05-15 = No Permission

d) Enter the value (00-71) for the area assignment for this user and press [#].
Please contact your installer for the right Values or check Table in Quick Reference Guide.

e) Enter the new user code (Default code length=4 digits / 5 or 6 digit code must be enabled through the installer) and press [#].
It beeps twice and the Keypad shows the next user.

f) Press long [-] to exit.

Notice!
This function is automatically terminated if you do not press a button within 240 seconds or if you press [#]. One long beep indicates that the code already exists or that you entered an incorrect user number.

10.8.2 Change Individual Code

This function allows user to change the individual code.
How to change the code
a) Enter your code + [5] [5] [#] and press.
It beeps twice and the STAY and AWAY indicators start flashing.

b) Enter the new code (Default code length=4 digits / 5or 6 digit code must be enabled through the installer) and press [#].
It beeps twice and the STAY and AWAY indicators stop flashing.

10.9 Keypad Alarm Operation Commands

10.9.1 Keypad Panic Alarm

If you simultaneously press and hold [1] and [3] or simultaneously press and hold [*] and [#] for 3 seconds a silent panic alarm will be transmitted.
Please contact your installer to enable/disable the keypad emergency alarm functionality.

10.9.2 Keypad Fire Alarm

If you simultaneously press and hold [4] and [6] for 3 seconds a silent keypad fire alarm will be transmitted.
Please contact your installer to enable/disable the fire alarm functionality.

10.9.3 Keypad Medical Alarm

If you simultaneously press and hold [7] and [9] for 3 seconds a silent keypad medical alarm will be transmitted.
Please contact your installer to enable/disable the emergency medical alarm functionality.

10.10 Domestic Dialing

Domestic Dialing Alarm

When the control panel is activated into zone tamper/zone alarm, it can dial a mobile phone or telephone number of a family member/friend. A maximum of four telephone numbers can be called through the control panel during an alarm.
Contact your installer to enable/disable the Domestic dialing functionality.

Confirming the Domestic call

All alarm events need acknowledgement.
The transmission sequence is repeated until the control panel receives an acknowledgement tone.
The control panel automatically hangs up after 45 seconds if it cannot detect the acknowledgement tone and redial later.
The user presses [#] between two acknowledgement tones to confirm the alarm.
If the control panel got the [#] acknowledgement from the user, it will send 2 second long beep as acknowledge tone and hang up the line.

11 Troubleshooting

Problem	Reason	Solution
No display on keypad after power up	– AC power or battery fuse failure. – Abnormal RBGY wiring.	– Check if the AC power and battery fuses are properly connected and operate normally. – Re-connect RBGY.
No response to keypad operation (wrong tone sounds on pressing any key).	– Abnormal RBGY wiring. – The keypad is locked after many times of wrong passwords are entered. – Wrong jumper when multiple keypads are used.	– Re-connect RBGY. – Operate after 3 minutes. – Set the jumper again referring to the information on keypad address settings.
Constant on of the zone indicator.	– Wrong zone wiring. – Abnormal detector function. – Zone EOL resistor is not correctly connected to the end of the detector.	– Enter zone wiring once again. – Reset the detector. – Correctly connect the zone EOL resistor to the end of the detector.
Fault indicator constant on/ flash	– Date and time fault displayed in programming although date and time are not set. – Backup battery is not connected or the voltage of the battery connected is lower than 12V. – Alarm siren is not connected. – The telephone number is incorrectly set. – Telephone network is not connected. – The tamper switch is not connected. – External module should be used for programming, but it not connected actually.	– Set date and time. – Connect the battery or resume the voltage of the battery to over 12V. – Connect the alarm siren (with the alarm siren substituted by a resistor of 1K) – Correctly set the telephone number again. – Connect the telephone network. – Connect the tamper switch or the short circuit jumper. – Connect modules for programming such as DX2010, DX3010, B426, or ITS-DX4020-G.
No response from the zone for a short time after power up	– To ensure normal operation, the system should be left alone for a minute after power up.	– Operate after 1 minute.

AC power fault	– AC power fuse is burnt.	– Check if the 18V of the transformer is correctly wired and replace the fuse.
Over current protection of the auxiliary power	– Abnormal wiring of the 12V auxiliary power – The auxiliary power exceeds the power supply upper limit of 2000mA for the control panel.	– Reconnect the auxiliary power. – Use external power supply for perimeter devices.
The auxiliary power cannot be recovered after short circuit.	– AC power and battery fail.	– Power up AC power and battery again.
Failure of battery is still displayed after the battery is replaced	– The battery might be tested 4 hours after the system is armed each time. – The voltage of the battery is lower than 12V.	– The fault will be automatically cleared when the system is reset or the battery is re-tested. – Charge the new battery for a period of time until the voltage reaches 12V or above.
Not entering programming mode after power up.	– The system is in alarm state. – The system is in arming state.	– Reset the alarm. – Disarm the system and keep it in the disarming status.
The red LED on the main board goes off	– Abnormal AC power and backup battery. – The main board fails.	– Check AC power and backup battery. – Replace the main board
The system does not dial when the alarm presents.	– Relevant receiver parameters are not set.	– Correctly set the telephone number, set transmission format to CID and set zone alarm to corresponding paths.
Remote telephone arming fails.	– The remote telephone arming is disabled (the address 0144 is set to 0). – There are multiple areas in the system.	– Program the address 0144 to a number from 1 to 15. – The telephone arming is available when the system has area 1 only.
RPS cannot perform remote programming and control.	– Both addresss 0144 and 0145 are set to 0.	– Program the address 0144 to a number from 1 to 15. Program the address 0145 to 1.

Occasionally abnormal communication in use of Contact ID/personal telephone alarm.	– Extension system is used in the telephone network. – The telephone network support ADSL as well.	– Add dial delay in programming. – Connect the system after the ADSL filter.
No response from keypad and alarm siren (disabled) when an alarm is triggered by the zone.	– The zone silent alarm is enabled.	– Disable the zone silent alarm.
The control panel cannot send any reports (programmed to send reports to receiver).	– The transmission format of the receiver is programmed to 0 = not used.	– Program the transmission format of the receiver to 1 or 3.
A-LINK cannot be connected with ITS- DX4020-G.	– The parameters of ITS-DX4020-G are not properly set.	– Recommend to set the parameter ACK TIMEOUT of ITS-DX4020-G to the maximum (600) and set TRANSMIT BUFFER LIFE TIME to the maximum (120).

12 Maintenance

13 Technical Data

Panel		
Enclosure:		
Dimensions (HxWxD):	–	375 x 322 x 88 mm(L x W x H)
Weight:	–	4700g
Environmental Considerations:		
Relative Humidity:	–	10%-95%
Operating Temperature:	–	-10°C - +55°C
Supervised Zones:		
Onboard:		
Z1:	–	2 wire fire zone or Single or dual end-of-line (EOL 2,2KΩ) tamper point support
Z2 - Z16 COM:	–	15 Single or dual end-of-line (EOL 2,2KΩ) tamper point support
Tamper:	–	Enclosure tamper input (does not reduce point capacity)
Outputs (PO):		
Programmable Onboard:		
PO -1:	–	supervised output max 500mA
PO -2:	–	supervised output max 500mA
PO +3:	–	+12V / max 750mA
PO +4:	–	+12V / max 750mA
Onboard:		
Watchdog PO -5:	–	/ max 100mA
Number of...		
Zones:	–	64
Users:	–	64
Key Fob Users:	–	DSRF = 24, Radion = 128
Events:	–	254 history events, stamped with time and date
	–	254 EN history events, stamped with time and date
	–	254 dialer history events, stamped with time and date
Pin Code variations:	–	1.000.000
Keypads:	–	16
DX 3010:	–	2

B 426 or DX 4020 or DX 4020G (only 1):	– 2
DX2010:	– 6
DX 4010:	– 1
RF Receiver:	– 1
RF Repeater:	– DSRF = 0, Radion = 8
RF Sensors:	– 64
RF Keyfobs:	– DSRF = 24, Radion = 128
– **Power:**	
Power Supply Type:	– EN = A
Transformer:	– 230V Input/18VAC 50VA Fuse=1A
AC Input:	– AC Input Voltage: 195 VAC to 253 VAC – Line Voltage Frequency: 50 Hz
DC Output:	– maximum current for all components 2000mA – max current for all components Battery 7Ah standby 12h (recharge Batt 80% in 72h) = 550mA – max current for all components Battery 17Ah standby 12h (recharge Batt 80% in 72h) = 1500mA – max current for all components Battery 17Ah standby 36h (recharge Batt 80% in 24h) = 480mA
Aux 1(+12V/GND) Output:	– Nominal Output Voltage under AC line input: 13,8 VDC +3% / -5% – Output Voltage Range under AC line input: 13.11 VDC to 14.2 VDC – 900mA maximum – Vpp (max) 675mV
Aux 1(+12V/GND) Output:	– Nominal Output Voltage under AC line input: 13,8 VDC +3% / -5% – Output Voltage Range under AC line input: 13.11 VDC to 14.2 VDC – 900mA maximum – Vpp (max) 675mV
Option Bus 1:	– Nominal Output Voltage under AC line input: 13,8 VDC +3% / -5% – Output Voltage Range under AC line input: 13.11 VDC to 14.2 VDC – 900mA maximum
Option Bus 2:	– Nominal Output Voltage under AC line input: 13,8 VDC +3% / -5% – Output Voltage Range under AC line input: 13.11 VDC to 14.2 VDC – 900mA maximum

Panel PCB:	– Quiescent current maximum 100mA
Battery:	– 12V/7 Ah, lead acid rechargeable – 12V/17Ah, lead acid rechargeable – Low battery condition is below 11,0 VDC – Minimum battery condition is 10,8VDC
Certification:	– EN 50131-3 Grade-3 Environmental Class-II
Keypads:	
IUI-AMAX4-TEXT (LCD Text Keypad)	
Relative Humidity:	– 10%-95%
Operating Temperature:	– -10°C - +55°C
Input Voltage range:	– 10.8VDC - 13.8VDC
Current Consumption:	– standby 31mA – maximum 100mA
Cable requirements:	– four wire, AWG18 or AWG22 – maximum length 200m (Panel to last KP) – maximum BUS 1 length 700m (max 14 devices, max 8 KPs) – maximum BUS 2 length 700m (max 14 devices, max 8 KPs)
EN type:	– EN = B, IK = 06, IP = 30
Certification:	– EN 50131-3 Grade-3 Environmental Class-II
IUI-AMAX3-LED16 (16 Zone LED Keypad)	
Relative Humidity:	– 10%-95%
Operating Temperature:	– -10°C - +55°C
Input Voltage range:	– 10.8VDC - 13.8VDC
Current Consumption:	– standby 31mA – maximum 60mA
Cable requirements:	– four wire, AWG18 or AWG22 – maximum length 200m (Panel to last KP) – maximum BUS 1 length 700m (max 14 devices, 8 KPs) – maximum BUS 2 length 700m (max 14 devices, 8 KPs)
EN type:	– EN = B, IK = 06, IP = 30
Certification:	– EN 50131-3 Grade-3 Environmental Class-II
IUI-AMAX3-LED8 (8 Zone LED Keypad)	
Relative Humidity:	– 10%-95%
Operating Temperature:	– -10°C - +55°C
Input Voltage range:	– 12V normal

Current Consumption:	– standby 31mA – maximum 60mA
Cable requirements:	– four wire, AWG18 or AWG22 – maximum length 200m (Panel to last KP) – maximum BUS 1 length 700m (max 14 devices, 8 KPs) – maximum BUS 2 length 700m (max 14 devices, 8 KPs)
EN type:	– EN = B, IK = 06, IP = 30
Certification:	– EN 50131-3 Grade-3 Environmental Class-II

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